

NPHII Grantee Update: South Carolina's Performance Management System

CDC Performance Improvement Managers Network Call

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Today's Presenters: Jeremy VanderKnyff, South Carolina Department of Health and Environmental Control

Moderators: Melody Parker, CDC/OSTLTS
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Tonya (Operator): Good afternoon and welcome and thank you for standing by. At this time all participants are in a listen only mode. Today's conference is being recorded. If you have any objections you may disconnect at this time. Now I would like to turn the call over to a speaker—to Melody Parker. You may begin.

Melody Parker: Greetings and good afternoon everyone. Welcome to the January Performance Improvement Managers Network webinar. I am Melody Parker with the Office for State, Tribal, Local and Territorial Support, and I'm joined here today by colleagues from OSTLTS. Teresa Daub and I will co-moderate this call. So thanks for joining us today for this first one of 2013. The Network is a forum that supports all NPHII performance improvement managers in learning from each other as well as from partners and other experts. These calls are a way for members of the Network to learn about each other, share information about resources and training opportunities related to our work in quality improvement and performance management. So, on the May—some of you may remember, on the May 2011 PIM Network webinar Joe Kyle of South Carolina showed us what his agency had to work with and what they wanted to accomplish when it came to managing their performance data and developing their performance management system. So today we'll hear about how far they've come, but before I introduce our speaker Teresa's going to review some of our tech features of the call today. Teresa?

Teresa Daub: Thanks, Melody. So for those of you who are not able to access the web portion of today's call, please refer to the slides that Melody e-mailed to you earlier. For those of you on the LiveMeeting site, you will see the slides on your screen. You can also download the slides from the LiveMeeting site via the icon at the top right of your screen. It's the one that looks like three sheets of paper. If you're on



the web you will also be able to see other sites participating in today's call by looking at the attendees under the link at the top left. We will be taking questions on the call today and there are two ways. First, you may type in your questions and comments at any time using the Q&A box which you can find by clicking Q&A in the toolbar at the top of your screen. And secondly, we'll open lines for our discussion after our presenter is finished today. So please mute your phone now, either by using your phone's mute button or pressing star-6 on your phone's keypad. Note that we'll be announcing the identity of those submitting questions via LiveMeeting, so if you prefer to remain anonymous you may do so by typing Anon either before or after your questions submitted in the Q&A box. So today's call will last approximately one hour. The call is being recorded and the full presentation will be archived on the OSTLTS PIM Network web page. And right now Melody has a few polls to get us started.

Melody Parker: Okay. We'll be conducting a few of those today and this is our first one. Our first poll question will give us some idea of who is participating on the call today. Please indicate your affiliation. Are you a state, tribal, local, territorial, or US-affiliated Pacific Island health department, are you a national public health organization, or are you something else that we have not captured in our list? Please vote now. All right. Poll results give us about 61% of you are state, 17% are local health departments, and we're waffling there in the territorial and national public health organizations as well as other categories.

Our next poll: Are you planning to attend the 2013 April 23rd to 24th Public Health Improvement Training, formerly the Agency Systems and Community Health Improvement Training, which will be held again prior to the NPHII grantee meeting? Please answer now. Oh, these results are making people in the room happy. Some of you are still undecided, about 12% of you. The majority, an enthusiastic yes. Thank you for participating. We also want to hear your feedback about today's call so in addition to these first, we'll have a final one at the end of the hour where you can tell us what you thought about today's call.

Today, our speaker from South Carolina is Jeremy VanderKnyff. He is the PIM and the Acting Director of Performance Management at the South Carolina Department of Health and Environmental Control. Prior to joining the DHEC office of performance management in 2009, he worked as an instructor and National Science Foundation research fellow at the University of South Carolina, my alma mater, where he is completing his doctorate in medical anthropology. Jeremy, dazzle us please. The floor is yours.

Jeremy VanderKnyff: Hi. Thanks Melody and Teresa, and thanks to everyone for joining on today's call. Before I get started I also want to give a big shout out to my predecessors, Joe Kyle, whom I know many of you know, and also Doug Taylor. Because what we'll be talking about today, the process that we'll be talking about, you know, it started years ago. And where we've come from and where we hope to end up is due in no small part to their great work here in South Carolina. So today we'll just be talking about South Carolina's performance management system, the new performance management software. We'll go through very briefly a history of performance management at DHEC, talk about our development process that we went through for our new system, and then sort of introduce the features of the system



itself. And it's going to be a show and tell but I'm going to do the tell before the show, you know, try to build up some suspense I guess. Then we'll close out with the questions and answers.

All right. Next slide please. So this is getting into that sort of semantic discussion that I know many of us have had when we're talking about performance management system versus a performance management system. Today we'll be talking about system in the sense of an IT application, the software that runs on a web server. Our performance management system, however, is of course based on the Turning Point Framework as I know everyone else has no doubt seen this diagram many times. It guides our development when we're thinking about the IT application system. But just so you know, when we talk about—or when I talk about system for the rest of this call I'm referring to the application itself so as not to confuse anyone. I get confused myself quite a lot.

Next slide please. To talk about where we are now, we sort of have to talk a little bit about where we were. Like Melody opened up this call saying where we were back in 2011. And this screen shot that you see here is it, it's—we refer to the old system and it was a little bit patchwork. This is just kind of what it looked like. This is as nice as it ever looked, just so you know.

So next slide please. Our old system was definitely a patchwork kind of a thing. It started as an Access database that ran on one person's computer. Then the idea—and of course a great idea—we should allow people to be able to enter data remotely so not everything falls on a single person. As a result there was sort of a little bit of a web interface and the sequel server that got hooked into this thing. Not always that successfully. You know, it had its—more than its fair share of technical problems over the years, which is one of the fundamental reasons why we wanted to move on with a new system built from scratch. It was linked to DHEC's strategic plan. It was linked kind of inextricably to that, so as strategic plans changed and goals and objectives changed you would hope that the performance management system could change as well, but that was not the case.

I won't ask you to go back, but on the previous slide all our measures were—you would have to know Oh, excellent. For example, you'd have—if you wanted to find out what we are doing about HIV testing you'd have to remember, okay, broad goal 3, strategic goal 3A, objective 3, to be able to get to your measure. It was not intuitive. The data could be entered at the local level where—South Carolina's a centralized state, we have 46 counties that are split into, until recently, eight public health regions. Actually as of March 1st we will be at four regions. The system also had very limited reporting options. And limited is even being a little bit kind. You could not pull data out of the system. If you were logged in remotely through the web, you could only get it through the Access database. Even then the reporting—the reports were limited to sort of an output in a semi-tabular format that was not the most useful even for copying and pasting purposes. It was inflexible and difficult to maintain. Actually when I started with the office one of my duties was sort of working very intensively with this system to try to bring it up to where we wanted it to be, this old system. And it's a challenge. You couldn't really add new measures without, I mean, quite honestly praying that it would work. If you—at one point I had to call a predecessor when I was trying to add a new date in and I accidentally pressed Tab in the table instead of Enter, thereby bringing down the whole system. Suffice it to say it was not designed for flexibility. It was,



however, designed for Internet Explorer 6 which came out in 2001. It is not really compatible with anything beyond Internet Explorer 6. It won't work with Chrome, it won't work with Firefox. There's only limited compatibility with later versions of Internet Explorer. All this to say we need a change. Change needed to happen.

Go ahead to the next slide please. So all this sort of led us to realize that we needed a good, solid process that involved a lot of people, you know, sitting around the table to figure out what we needed for a new performance management system. And this was done through a process called joint application design, or JAD sessions, held in 2011. There were six planning sessions of about two to three hours each. It was facilitated, we had an in-house programmer. We had actually sought a consultant, a contract consultant, outside the agency and we had—I've never actually heard of turnover in an hour, but that's how long our first person lasted before they decided they didn't want any part of this, oh, the hard life of performance management. But it involved these sessions when they happened, involved over 75 stakeholders statewide from different parts of our public health agency. It included program managers and program coordinators. We had senior leadership, you know, had a seat at the table. And also our quality improvement staff from central office in our regions. And one of the things that we did during these sessions was look at other systems that were out there, you know, commercial and other systems that other states were using. Kind of models and just see what's out there. Some of the questions that we asked is these were essentially, these JAD sessions were essentially, a facilitated focus group. And they covered areas like the user interface, you know, what do you want to see in that? How about reporting features? What's going to be useful to you? What do you need? What kind of database do we want to use? How's our data collection going to work? One of the big ones was interoperability with other data systems. I'm sure DHEC is not alone in the age-old conundrum of, you know, as soon as you've got new technology and get a new system it can't talk to the old system. There's very little backwards compatibility. So we wanted, to the extent possible to have our performance management system be able to talk to and pull data from some of the other systems that we had at the agency. And then the—sort of the crowning achievement of all this was boiling it down to what are the features that we want in the system? And these kind of split into our must-haves and our like-to-haves.

All this resulted in something called a functional requirements document, which is something our programmers are able to use. It sort of operates as both a contract for our expectations of them as well as helping them to structure their thinking and coding. It was kind of split into two phases. Phase one, those were our must-haves. And some of these that came out of the JAD sessions were we want to be able to sort indicators by org unit. No more memorizing, you know, the hundred different objectives in the strategic plan. If I work for family planning I should be able to collect family planning to see my indicators. We wanted search features to be able to, you know, even if you're not looking by organizational unit to find what you need. Being able to show relevant measures for each user based on their login rather than just throwing everything in the kitchen sink at a user, really be able to boil it down to what is it that I need to be able to interact with or report on. We use data definitions. We refer to them as spec sheets for each of our performance measures. And those were done, you know, they would be updated by the programs in the office of performance management, exported to PDF,



uploaded to our intranet, and then—but the problem is that it was not very intuitive to find those, particularly when you're responsible for entering data for a new measure and it's your first time entering data for that measure. And you're not really familiar with how you're supposed to report the data. We wanted to be able to make it easier to access that. Also customized reports, actually reports period, but really being able to customize them with the measures and the information and data that you need. And then finally, be able to export those reports to Excel. We couldn't, you know, a lot of people use spreadsheet data to be able to form their charts and everything else. We didn't have that capability. It was something we definitely needed.

Now phase two, that was our keep dreaming, you know, sort of our developer copied them down as sort of a maybe when we have the time and money we'll be able to get these. This included charts, graphs, mapping features, being able to collect data more frequently than monthly, being able to add users who have their own performance measures and want to come up with their own performance measures, letting them add into the system. Being able to link our performance measures to some of our regional and national goals, you know. Of course, Public Health Accreditation Boards Standards and Measures were coming out at this time as well as Healthy People 2020. We wanted some kind of a scorecard, you know, really be able to see at a glance how we're performing. A customizable data dashboard with the information that we want at a glance. We wanted to be able to import data from other DHEC systems and from spreadsheets. So not all data entry has to be manual. Which, of course, I guess South Carolina probably doesn't have that many in the grand scheme of things, but 46 counties and you're entering that for multiple measures at once, it can be kind of a pain in the old system. And finally be able to upload documents, you know, we're thinking specifically of quality improvement story boards that were related to the measures that we're putting in the system.

Now one of the questions is why did we decide to do this in-house versus going with an off-the-shelf product from a vendor. And the first is that we figured and calculated out it's much more cost-effective. We don't have yearly subscription or maintenance fees if we're doing it in-house. Second, there's a significantly lower cost per user. South Carolina is a centralized state and because we're trying to really emphasize making performance management sort of built into everyone's job and hopefully reaching that point where it becomes, you know, sort of a fact of life and not just limited to one office or a handful of people. That was going to mean a lot of users were going to need to be able to access this system. If we go—a lot of the off-the-shelf products or commercial products that are out there, you know, charge a per-user fee. Being able to scale that up to theoretically our 2,500-plus employees in DHEC's public health was just going to be too cost-prohibitive. And then finally we don't need to purchase new or proprietary servers. A lot of these software that you buy off the shelf frequently requires a server purchase from the vendor itself to be able to run. Our second main reason was interoperability. The architecture we ended up using is built off of the data architecture that has just come out in DHEC in the last couple of years, some code we've actually originally used for an inventory system of the different IT applications that were in DHEC. So people could go onto the web, add their application. But suffice it to say it's a very flexible system and as such it's going to be considered the new standard to which all of our new applications are going to be built. As a result, our application is going to



be able to talk to those moving forward, and hopefully some of our legacy systems that aren't built on that framework. Then finally our information systems staff are going to be familiar with that code base and they can provide ongoing support. You know, we won't need to hire somebody, an expensive consultant by the hour to be able to come help us if the system goes offline. We have all that knowledge and that skill set in-house.

Then finally, and this is probably the most important, it's developed to fit our needs. We get exactly the features that we want and we're not going to be spending money on necessarily bells and whistles that, you know, we know we're never going to end up using but are included with some of these off-the-shelf products. And also we won't have to go through the extensive customization process that would be necessary for one of those systems as well. So just briefly a timeline of our development: First line of code was written on this January 6 of 2012. We finished everything we wanted and more down at the bottom there December 31st, 2012, our contractor's contract was up as of January 1st. He was here staying late making the finishing touches. So it's—I've just got to give a shout out as well to—we have a rock star as our contract programmer who actually did the development. He's amazing. Of course we're keeping him on for other projects outside of performance management, but he's been absolutely instrumental, just a powerhouse at this.

But in between January 6th and 12-31, we established a couple of smaller stakeholder groups. Obviously you don't want to convene 75 people every time you want to inform people about the progress. So we had a performance management advisory board that was sort of a mishmash of people from central office and our regional leadership, our program management as well from PM and QI staff, and then the user group. These are the folks who are actually going to be keying in the data, pulling reports and everything else. And both of those groups have been very instrumental in guiding the development over the last year. We have monthly meetings with the advisory board between January and May and I held weekly and as-needed progress meetings with our developer. As I'll talk about a little bit later, this is absolutely crucial. It has to be hands on. You know, it helps the developer and helps you to make sure everything's being prioritized properly. And then our user group was of course instrumental in testing the system throughout different iterations before it went live. And then we launched our must-haves, actually our must-haves-plus. Basically everything that was on our original functional develop—or functional requirements document—we launched in September as sort of a soft rollout. And then it's the icing on the cake that was finished up at the end of December.

How are we evaluating and training folks on this system? First thing was a system usability survey. We did this after the—or during the testing of the phase one system. Mind you, it was kind of a very low number of respondents, but most people were positive. However, we had one person who was exceedingly negative about it, which is great information. And as it turns out it came out in the focus groups the other people had sort of read the user manual and done the training. This person took what was actually some of the advice that was given and jump in and just get your feet wet and see what happens. And while the system—I've just got to put in a plug before you all start thinking that this system's horribly complex. Once we had a training with this particular individual who had scored the



system quite low for usability, she became a huge cheerleader. She asked us out to her region to train her staff on the system. Become definitely a champion of it. But this survey we're going to repeat again after our—we're actually going through a reorganization right now and the official, you know, too much applause and fireworks rollout is going to be happening sometime in March of this coming year. So we'll do the usability survey again then, get more respondents to find out. We'll also repeat focus groups during that time.

Then our training, we've got step-by-step user manuals as well as interactive training developed by USC, and we'll be converting our test server into sort of a training sandbox so people can play around, learn how to use the system without worrying about, you know, messing up anyone's data.

All right, drum roll please. Next slide. Do you remember what we looked at before? This is what we've got now. On this slide, you know, I'll talk about the features in just a second here but you can see we've got dynamic graphs and different types of graphs that can come from the user customizable dashboard. Those are the measures up at the top that this user, actually me, chose to have. There's sort of a stoplight view in that right column there, you can just see at a glance for your organizational unit. Are we meeting the standard, yes or no? Are we improving? Are we getting worse? All this accessible, it's a major leap forward. All right. So what are some of the features here? We've got our customizable data dashboards with graphs. Remember this is our keep dreaming feature but because we have, again, such an amazing developer working with us he was able to add this stuff like it was no sweat. We have customizable reports. These reports are, you know, can include graphs, they can include different types of information. You choose the measures that are on them. Reporting areas, export them to Excel, to Word, to PDF. Our performance—this system can include both performance and health status measures and they can be linked to PHAB standards and measures and Healthy People 2020 topics and objectives. We've got easily accessible data definitions and we've got that document upload in the layers, which is one of the features that we wanted to include.

We've got e-mail notification with data entry required. One of the fun things that I got to do when I first started was e-mail the 30-some-odd people once a quarter and every end of fiscal year to remind them to put their data into the system. So that meant writing 50—first finding out what data was not in there and then sending it to them. This system will notify them automatically at the beginning of—or the end of every reporting period, plus or minus a grace period that the users can set when creating measures. There's manual data entry from the dashboard or you can do automatic data entry from—by importing a spreadsheet. We've actually got it talking to some of our sort of centralized appointing/soon-to-be electronic medical records system. We built that compatibility in there. We're getting some new performance data around, you know, issues of scheduling, patient flow, et cetera, that we didn't have before which is very exciting. We've got user-based security information. The system is flexible, and I'll stress that and we'll talk about that in a minute. And then the system encourages transparency. You know, because you're able to see—in the old system you couldn't see actually and get the data out of it. With the new one you're really able to see what—how everyone is doing. You know, if you're looking at another region or another program and they're doing, you know, exceptionally well on a particular



measure and perhaps you're not meeting the standard yourself, you'll know hey, I should contact these people. I should find out what best practices are out there. And it's really, you know, just being able to have the freedom to share data with one another, you know, in a very unobtrusive manner I think is a major advantage.

So talking a little bit about our dashboard, just got a couple of pictures for you here. You know, you can choose what type of graph you want to see. You can decide what areas are shown as well as, you know, limit it by a particular date range. We've also got mapping features in for South Carolina's counties. You can see which counties are meeting the standard here, which counties are not. You can—we've also, I don't have a picture of it here, but there's a heat or intensity map, again at the county level, which, you know, we've all seen them when looking at things like obesity rates, health status measures. Could be very useful for some of that data that programs are frequently asked to provide to multiple different people throughout the agency. Performance management can actually serve as a—or performance dashboard can serve as a repository for some of those, you know, obesity rates as an example, data that, you know, is frequently requested and can be shown very visually, very easily. We've also got customizable reports I mentioned. We've got a very powerful reporting engine but still easy to use, I have to throw that in there. You're able to choose different types of reports shown here on sort of that left image, it's the reporting engine itself. You can choose the graph that you want to have and the reporting areas to be included, which measures you want, the date limits. It's actually so detailed that when you're choosing, creating that intensity map, you actually have the option if you so choose to pick individual colors for every category in that intensity map. That's kind of fun. I'm sorry, I say fun. I didn't realize before working in performance management that it turns out I'm a complete data geek. So I sometimes get a little bit exuberant about features that other people might not be quite so excited about. But it's exciting, right? In the middle image you can see, it's in one of these reports, a measure report that was exported to PDF. And then the third is a stoplight report. Some of you might have used them before. It's a really useful way, we like them for being able to see at a glance. Sort of compare performance across different reporting areas and across a range of measures.

So I mentioned this is linkable to PHAB and Healthy People 2020. All of those standards and measures and all of those objectives are in there. And what does that mean? Well, it means Kaye Bender or maybe her site visitor is calling you and asking, you know, what are you doing to address standard 7.1, as an example. Well, in the system you can click on standards, you know, click on the—up in the menu PHAB Standards and Measures. Click on 7.1 and then scroll down to performance measures. It'll tell you every performance measure that relates to that particular PHAB standard or that Healthy People topic or objective. So it makes it—it's a very useful way of organizing your data and trying to—we're really stressing that our performance indicators moving forward are linked to some of these national objectives and priorities. You know, it's just a good thing to do. I know many of you are pursuing accreditation so you're probably thinking in similar fashion about we really need to make sure everything is aligned to this goal.



You've got just a screen shot here of entering data directly from the dashboard. You've got the measures that you're going to need to use most often. You can just add them very quickly and then there's an Enter Data button. Click that and it just brings up a dialog box. You put in your numerator, denominator, any notes you have, load your dates in and click submit and you're good to go. I mentioned accessible data definitions. We don't even—I said we used to have to update these things every so often, you know, usually about once a year talk with the programs. Is this measure still relevant? Is that measure still relevant? Make the changes, save it as a PDF, put it on our intranet. Why do that when everything can be housed directly in the database? Just clicking on a performance measure from the dashboard or from the measures list here you can bring up that data definition. All the information you need to know, the contact info, everything else is right there at your fingertips.

How about security? Now I'll say that our system is housed on our intranet rather than the internet, so it's accessible only to our users inside the agency. The system can be adapted very easily to live and be accessible to the outside world, but we've kind of got three different levels of security. I know that's always a concern with some of this information. First is it's system-wide. It's tied to our active directory system. That means that it's tied to the same login system that the rest of our agency runs on, so as long as you're logged in either from your terminal or through a VPN remotely you don't need a separate login. It knows who you are and loads up your dashboard accordingly. We've got user-based security. Every user, when they're added to the system, is assigned different roles and those roles might be can add data, can edit measures, can add users. And that makes sure that, you know, users don't get bogged down, have to worry about oh, I might mess this up, I might mess that up. You're only getting, and you're only—actually, we segmented our training accordingly. What you need to do, that's what you're going to get trained on. We of course encourage people to reach outside the comfort zone a little bit and try to learn about the capabilities of the system, but, you know, it is based on user as well so you don't have to worry about people necessarily going in there and accidentally messing with your data. It's also measure-based, so you can select when you're creating a measure the users or the org units that are allowed to edit data for that measure. So first the user has to have permission to edit data period, and second they have to be allowed to edit data on—for that measure. So again it just helps to make sure that everything's secure and very orderly.

And we also have private measures, a little flag that you can set when creating a new performance measure that makes it viewable only by selected users or org units. That's less—you know, I mentioned transparency a second ago and now I'm talking about private measures. But we really put that in place to make sure that, you know, we have some people who are—they're into counting widgets and they do very good work counting their widgets, but they count a whole lot of widgets. And they don't necessarily want to share all the different measures that they have with everyone else in the agency. If they're, you know, in their program counting 40 different things and 40 different measures this gives them the ability to sort of use the system to fit their needs without having to worry about it messing it up for anyone else. Right?



Flexibility. This is absolutely key. Users can add and edit performance measures, including private measures, themselves. If they have the security permission, this means that office of performance management, we're not the gatekeeper any more. You know, we—maybe Sergeant at Arms? Help keep some order in the system? But the idea is that it grows. As people find uses for this then they can add their own measures. To give an example, we had a program where every quarter they would have contacts in all of the regions and all of the counties send them Excel—this particular program manager, they would send them an Excel file and then this one poor program manager would take all those 20-some-odd Excel files and put them into a single Excel file and then from that single Excel file generate all the reports. Well, she saw this system and she said, that's amazing. They can all just put in this information, we create the performance measures. This is actually for home health. Put them in, I can add them myself and change them as necessary, and then all the folks out in the regions can enter in their information very easily and I can generate the report myself without needing to worry about 20 or 30 different data sheets.

Also we've got superusers. I love that title. That refers to me in this case. It was, I guess it's been used before but claimed by our IT—our developer, rather. And superusers with the highest security permissions, we can create new types of measures. New types of measures, mind you. Or units or objectives. And update them through a web base called the Admin Panel. So all through the web, you know, somebody was making a joke because there's in South Carolina a few days ago a newspaper story that ran that said that they were considering adding a 47th county to the state and somebody joked about what that's going to do to the system. And I tell them it's no sweat. I can add that 47th county in about ten seconds because the system was built with flexibility in mind. And that's—one of the reasons for that is during the development process actually we had a big reorganization here in central office, and the problem then was that, you know, everything was sort of hard coded into the menus, for example. I mean you could add a new—I could add a new program area but, you know, what was a division could no longer be—couldn't be a program area now, et cetera, et cetera. So that, you know, a conversation I had with the developers, we need to be able to account for this because this isn't going to be the last reorganization we go through. We need to make sure it's flexible. And as such, I mentioned our regions are reorganizing in March and consolidating a little bit, and because we thought about this and actually had that—what felt like a disaster at the time when they reorganized central office during development, is that it's not a pain. We can make all those changes and all our menus even, our drop-down menus, are going to change accordingly. And all that can be done without having to change a line of code.

The way data is organized is entities. An entity is an org unit or a manager, et cetera. It can be linked to other entities, so a program area can be linked to a performance measure and then you can organize data that way. If you're looking at family planning program, you can click on performance measures and see what performance measures relate to it and vice versa. And this is the big one. This system is entirely open source 100%. And so what's that going to mean as a result?



Next slide please. It means you can have it at your organization free of charge. We're making the source code available. Like I said it's open source. All the little features, the mapping features, the charts and everything else, all open source as well. Our source code's going to be available in 2013. When we put this thing through its trial by fire in a month or so we'll be able to find whatever last pesky remaining bugs there are, and after that point you're welcome to just—if this is something your organization would be interested in using, just contact me and I'll make sure that you're able to get that code. You'll need a web server and a sequel server and that's it. And I'm sure many of you, if you've got anything on the web already, you probably have the equipment as well. For customization, now you will need a programmer, some kind of developer to install the software and compile the source code for your organization and also adapt the security and mapping features to your organization. Like I said, our security was built into our active directory. According to my developer it's very easy to change that in the code as long as the person knows what they're doing. I'm assured that the source code is well commented and easy to follow. And then of course the maps.

I'm sorry, could you go back for a second? Right. And then the second thing is that non-technical staff like myself, I'm able to add and populate this system all through the web without needing to know how to code or ever touching the source code. So you can train people. There's live user manuals available to learn how to use the Admin Panel and it should be fairly straightforward if it's something you're interested in.

Sort of wrapping up here, some lessons learned. There is obvious lessons and there's less obvious lessons. Some are obvious lessons, might have been less obvious to you and vice versa. But you've got to involve your stakeholders very early in the process and keep them involved throughout. That kind of goes without saying, but, you know, they're going to be the most important thing that you get as you're developing is the input that you get from the people who are looking at it and testing it. Second, a performance management system is only as good as its content. This is flashy, but while we're working on the flash in the system and make it oh, it's got graphs and charts, yada, yada, yada, the important thing is that doesn't matter at all if the content that's in it is not useful to anyone. So we're also working with our programs, we have been working with the programs, to really focus on effective, useful, relevant performance measures to make sure that the system, you know, is going to be put to good use. And then market, market, market. If you don't have buy-in, you don't have users. And if you don't have users, you don't have a system. Sell it. Go out there, if you're working on developing a system like this, go out, meet with your front-line staff, meet with program staff, meet with leadership. Tell them how this is going to change their life. Be like the guys on TV selling the slap chop. You have to do that, because that buy-in's going to be critical to the success.

Now, some of the less obvious. Like we found in-house development can actually be cheaper than purchasing something off the shelf when you look at subscription fees and user costs, et cetera. And you've got the people responsible for entering the data and content are your most important customers. Don't think that your managers, your leaders, you know, the folks at the top are necessarily the people that you're trying to please the most. Because, you know, chances are in a lot of cases you'll



have some who get very involved in this. Others are still going to just want to see a hard copy printed report on their desk once a week or once a quarter. But the people who are actually using the system and putting in that data, they are your key customers. You need to go out of your way to please them. You need to start testing as soon as the first line of code is written. Don't wait for a finished—quote, unquote, finished version. You know, as we find as soon as I have the ability to click a button, I was in this system working on it. Because what happened is as—if you're testing while it's going on, while it's being developed, we found lots of features, lots of annoyances, not just bugs but oh, man, I tell you, you know, it was sort of a well, we'll get to importing a spreadsheet data later but when I tried to put in our historical data and I was going through data point by data point for thousands of data points going back five years, I realized we need to check our priorities a little bit, you know, and moved up importing spreadsheet data. It's very important to start testing, find out what works for you and what doesn't. And last, you should be in constant communication with the developer monitoring progress, reporting errors. As soon as something doesn't work, take a screen shot, send it to him. Tell him what you did to get that. You know, this is sort of my first time going through a testing process with an IT application like this, and you know, you learn a lot. You need to be able to prioritize changes. Things that you thought, like I said a minute ago, that were really important, you might find out as you go on oh, we can wait on that one. That's not as important as doing this piece. And being able to talk with the developer, talk to them about your priorities, figure out what their timelines are and help them set timelines for the code that still needs to be finished.

Then last, we'll end on some—with some feel-good platitudes. Don't stop dreaming, shoot for the moon, et cetera, et cetera, et cetera. We got everything we wanted in a performance management system and more. If you asked us back in 2011 when we did this last—or Joe did this last PIM Network call talking about our old system, you know, we never would have thought that we'd be where we are today with one year's worth of coding. You need to think about what you want, talk about it, talk with your developer, put it in the functional requirements. Work on your priorities because you never know—don't settle, I guess is what I'm saying. You know, you'd be surprised that with the right people in place, the right stakeholders, the right developer, that you know, you'll surprise yourself.

All right? So I just want to say thank you to all of you who were able to attend. Thanks to the folks at the CDC and to our wonderful project officer as well, Colleen DiLiddo, I'll give her a shout out for supporting us through this process. So I guess we'll turn it over for questions and comments now.

Teresa Daub: Absolutely, Jeremy. This is Teresa, and thank you so much for your presentation. There is no need to apologize for your enthusiasm, because you are speaking to your people in this group. We are data geeks along with you. I want to say a quick congratulations on your progress, what you've done in a year is absolutely tremendous and I thank you tremendously for sharing that with us. I'm going to guess we have quite a few questions for you, because I heard you say that we could have your code. I heard you imply that we could not have your rock star programmer. So we'll need to get to those questions, but we have one from Magaly in Rhode Island, so I'll ask that and then Tonya will just open the lines and let people chime in with comments and questions. So the question here is how often are



measures and data updated, is it monthly, annually, et cetera, and if they're different frequencies, has that updating created any issue barrier for other reporting processes, et cetera?

Jeremy VanderKnyff: Well, I'll say that in our old system—well, we did, actually, all along we've had kind of a mix of—our most sort of frequent measure was monthly and then we had quarterly, we had semi-annual, state fiscal year and calendar year. And that did pose a problem in the old system as far as getting people to update their data when it was due. You know, in order to make sure that your improvement processes are responding to relevant recent data. Mainly because, you know, I'd have to go in and manually figure out measure by measure what's missing and what needs to go in and contact those people. So as a result it didn't always get updated monthly, because I didn't want to go through the process myself, you know, of just figuring out what needs to go in there and then reminding those people all the time. As far as updating the measures themselves to make sure that they're relevant, we usually did that once a year. Hopefully now, as people become used to the system and we identify, you know, contacts within each bureau and each program who are responsible and will be much more responsive thanks to the capabilities of this system. As far as putting in the data and updating everything, that—if you're able to go in and edit your measure yourself because your contact person has changed or your data source has changed or your standard has changed, we hope that people are just going to be able to go in and update that as they see fit. Now as for the last part of that question, has it interfered with other sources reporting processes, I guess, or other reports that need to go out, not that I'm aware of. Performance management, historically—this has changed, obviously, in the last couple of years, but, you know, as our Office of Performance Management was getting off the ground and really, you know, gaining a foothold and ideas about quality improvement gaining a foothold, you know, there's a priority measures report, but it wasn't necessarily always first on everyone's—on everyone's plate as far as what they need to tackle. I think that as performance management quality improvement has really diffused throughout our agency we're going to see people getting involved with it a lot more frequently. So hopefully it won't even necessarily need to be kind of a question of this is our yearly report, drop everything, guys, let's work on this. It's going to be much more a case of, you know, this is just something we do as part of our job. You need a report, you know, three clicks, here's your report. And it won't be a burden to anyone. Great question.

Teresa Daub: Thank you, Jeremy. And Tonya, let's open the lines now and hear if there are other questions or comments.

Tonya: Okay. All lines are open at this time.

Teresa Daub: And as a reminder to all of our participants, if you don't have a question, please mute your line.

Lori Ann DiMartini: Hello. This is Lori Ann DiMartini from the California Department of Public Health Office of Quality Performance and Accreditation. I unfortunately joined the presentation a little late; however, what really struck me about the presentation was not only the enthusiasm but also the



potential and possibility for driving organizational change to your performance management system. So congratulations on the incredible work you've done.

Jeremy VanderKnyff: Thank you.

Lori Ann DiMartini: We're just at the beginning phase of building our performance management system. We are gearing up for accreditation like many other departments of public health. And sometimes, and particularly this aspect is somewhat daunting to even know where to start. In fact, we're crafting a contract just to establish our business needs. And I must admit I did hear something about sharing source code, which my ears did just drop quite a bit. Could you share a little bit more about that and, first of all, thank you for your generosity, and then the second question that I have for you, would you be willing and—although I'm very tempted to lure your rock star programmer away be enticing him with Los Angeles and San Francisco but I suspect him or her may not necessarily bite—but if you would be open to perhaps engaging in some telephonic consultation with our department as we start our process? And I appreciate your responses to those two questions.

Jeremy VanderKnyff: Sure. I remember the second one. I might need to ask you to jump in again with the first one. The second one, absolutely. I'm, you know, I'm more than happy to talk and try to impart some of the experience that comes with going through this process very recently. You can't have our programmer, I'll tell you that. But as far as sharing—

Lori Ann DiMartini: Don't say that.

Jeremy VanderKnyff: --sharing the source codes, is that what your first question was?

Lori Ann DiMartini: Yes. If you could share a little bit more as to—and not being a programmer, what that would look like for those of us who might want to avail ourselves of that opportunity?

Jeremy VanderKnyff: Sure. I asked our IT folks, our programmers, you know if somebody else outside our agency wanted this source code, what would they need? And they said web server, sequel server. We package everything up. It just—the latest version of our source code is always sitting there on a shared drive and they said we just e-mail it to them, you know. And then their programmer just needs to I guess compile it onto the server itself, you know, at your organization or wherever. You know, that will require the input of someone who's skilled in that. I know every one of these agencies undoubtedly has at least a programmer or access to a contractor hopefully who would be able to do that—that kind of thing. I will say that while I'm happy to talk and provide as—whatever support I can to you, from the technical side of things our programmers are, you know, won't be able to necessarily provide support outside of what's already provided in the source code as far as documentation if your organization is interested in installing it. So I can give you everything that takes place on the web browser. I'm happy to tell you about whatever happens on the server itself. You might be—you know, hopefully you've got good programmers who would be able to figure that out.



Lori Ann DiMartini: I appreciate your generosity. And we have a whole division of IT folks which is, I think for us, is where to start. So thank you so much for the offer.

Jeremy VanderKnyff: Sure.

Teresa Daub: Are there any other questions or comments on the line? Okay, we'll have one more question here that we'll pose from Pragathi in Arizona. And Jeremy, the question is how have you used the data from these performance measures to drive or prioritize quality improvement projects? Do you have any examples of that yet?

Jeremy VanderKnyff: Great question. Well one thing that we're actually looking at right now, you know, that's sort of forefront of my mind is looking at some of our show rates in our clinics. We've got, I'd like to say 74 sites or something, clinic sites throughout the state. And trying to get at questions of productivity, not from an individual nurse's oh, she's not doing her job or he's not doing his job kind of a standpoint, but how the sort of, I guess, accessibility of the information as far as how are clinic appointments being scheduled, you know, and how frequently are people showing up is something that has been an important question going on recently. So what our new system is capable of doing is it's pulling that appointment data and productivity data and show rate data directly out of our clinic appointing systems and presenting it—actually sends reports directly to the supervisors. And it's also giving us, we're able to see variations in case load, variations in show rates, you know, having a graph helps for one thing. Just, you know, humans tend to think visually and that's very helpful. But that's really launching in providing a lot of important data as we move forward with the quality improvement project. Looking at productivity in the sense of how are we doing our clinic appointing, because historically it's been done differently in different sites across the state. So looking at ways to standardize that and we've identified as a result of this data best practices that are going on in certain sites in certain regions that we're now being able to diffuse throughout the state.

Teresa Daub: Well, thanks again, Jeremy. Unfortunately, we're bumping up against the top of the hour so we're going to begin to draw this call to a close. There were a few questions that were submitted that we didn't get to present to you, so what we'll do is share them with you after the call and get a response and Melody will post that on the PIM listserv so we can all benefit from that. So once again, thank you so much for the presentation, and thanks everybody for joining us on the line. I'm going to hand it over to Melody for a few final announcements and our last poll.

Melody Parker: Jeremy, you are awesome. You're your own special rock star, so, you know. Geeks, sing us the song of our people. This is awesome. So, the poll is up and for our final poll, please go ahead and rate the webinar. I'll be closing it shortly. Thanks so much for your attention. If you'd like to give some additional feedback please e-mail us at the e-mail on your screen, PIMNetwork@CDC.gov. Any other suggestions or further calls, anything at all that you'd like to tell us please use that address. We hope you're going to be joining us for our next call on February 28th. Don't forget that you can view and download these calls and the materials from the PIM Network webinar series on the OSTLTS PIM



Network site. And without any additional announcements or topics, we are adjourned. Thanks so much, you guys, and we will see you next time.

Tonya: Thank you, and thank you for joining today's conference. You may disconnect at this time.

