

Vital Signs Town Hall Teleconference
New CDC Data Tool: Antibiotic Resistance and Healthcare-Associated Infections
March 8, 2016
1:00 pm CT

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 you may press star and then the number 1 if you'd like to ask a question. Today's conference is being recorded. If you have any objections, you may disconnect at this time.

I'd now like to turn the meeting over to Mr. Steve Reynolds. You may begin.

Steve Reynolds: Good afternoon everyone. I'm Steve Reynolds, the Deputy Director for the CDC's Office for State, Tribal, Local and Territorial Support. I'm glad you could join us today. We'll be discussing the latest *Vital Signs* report about antibiotic resistant and healthcare-associated infections.

Before we get started, let's go over some housekeeping details. You can go online and download today's PowerPoint presentation so you can follow along with the presenters. The web address is www.CDC.gov/STLTPublicHealth.

Again, that's CDC's web site with a forward slash, STLT Public Health. Look on the far right side of the web - of the page for the *Vital Signs* teleconference link. Or you can Google CDC *Vital Signs* Town Hall and click on the top link. That should get you there as well.

On the same Web page, you can access bios for the today's - for today's presenters and the audio recordings and transcript will be there and will be available sometime next week. There will be time for questions after today's presentation.

But you can get in the queue at any time to ask a question. Just press Star 1 and say your name when prompted. Back to our topic for today. New CDC Tool: Antibiotic Resistances and Healthcare-Associated Infections. We are going to hear from four colleagues.

First we will hear from Nicole Coffin, Deputy Director - Deputy Associate Director for Communications Science and Communications Lead for Antibiotic Resistance in the Division of Healthcare Quality Promotion in CDC's National Center for Emerging and Zoonotic Infectious Diseases.

She will talk about the findings in this month's *Vital Signs* report. Then we will hear from Dr. Carolyn Gould. She is a medical epidemiologist in the Division of Healthcare Quality and Promotion and CDC's National Center for Emerging and Zoonotic Infectious Diseases.

She will discuss the targeted assessment for prevention strategy and then hand the call over to Ashley Fell, an Epidemiologist and a Healthcare-Associated Infection Prevention Coordinator for the Tennessee Department of Health.

She'll talk about Tennessee's implementation of CDC's targeted assessment for prevention. Then we'll hear from Ashlie Dowdell who is the Surveillance Coordinator for the Healthcare-Associated Infections Prevention Program at the Wisconsin Division of Public Health.

She will talk about using targeted assessment for prevention in Wisconsin. And now I'll turn the call over to Nicole.

Nicole Coffin: Thanks Dr. Reynolds. Thanks again for taking the time to join us today. I wanted to quickly go over some of our reasoning behind our *Vital Signs* and offer some of the main findings.

So when we approached this year's topic, we really had a goal of making the connection for folks between healthcare-associated infections and antibiotic resistance.

I think everyone on this call knows that a healthcare-associated infection is really an infection that people can get while they're getting medical care for something else. And it can be - it can cause serious infections that can lead to sepsis or even death.

The progress that's made in preventing healthcare-associated infections has been really encouraging.

But we wanted people to understand that of the healthcare-associated infections that we have yet to prevent, that many of them are caused by drug resistant bacteria and are being caused by drug resistant bacteria.

So for example, of the 18 antibiotic resistant bacteria identified by CDC as public health threats in the - in 2013, six of them in addition to *Clostridium difficile* caused healthcare-associated infections, or at least those are the ones that we focused on.

There are a couple more not in the *Vital Signs* calculations that are also healthcare-associated infections.

And we wanted folks to understand that preventing healthcare-associated infection in the first place or preventing resistant bacteria from spreading, is critical to turning the tide against other complications such as sepsis.

And that if more people are sickened by resistant bacteria for which antibiotics don't work, more people will suffer complications. Next slide.

So this MMWR that supported the *Vital Signs* turned out to be the first report that CDC's done to combine the progress of HAI prevention nationally with the antibiotic resistant status of those healthcare-associated infections.

And specifically, we got some of that data from the fact that nearly all US hospitals report common healthcare-associated infections to CDC, including infections following surgery and infections following placement of a tube in the bladder, or catheters or a large vein.

The common healthcare-associated infections that we receive data on includes central line-associated bloodstream infections, catheter-associated urinary tract infections and surgical site infections.

And as I said before, antibiotic resistant bacteria can cause these infections and make them difficult or impossible to treat. So what we did with the data was we took data from our annual HAI progress report which as you know, has both national progress and also state by state progress on preventing healthcare-associated infections.

And we looked at the national data specifically, which provided information about how well we were doing as a country, preventing those device-associated and procedure-associated infections that I mentioned, CLABSI, CAUTI and SSI.

And then we identified what percentage of those were being caused by antibiotic resistant bacteria. Next slide.

So the six drug resistant infections that were examined were the Carbapenum-resistant Enterobacteriaceae or CRE, MRSA, extended-spectrum b-lactamases, VRE and multi-drug resistant *Pseudomonas aeruginosa* and multi-drug resistant *Acinetobacter*.

And you'll see at the top bullet that the - the main finding and the main headline that we were targeting people toward, was the fact that one in seven catheter and surgery related healthcare-associated infections in acute care hospitals and one in four catheter and surgery related HAIs in long term acute care hospitals were being caused of any - caused by any of those six resistant bacteria.

You'll see on the slide that I have not including *C. difficile* in part because the *Vital Signs* report also examine the role of *C. diff* which is the most common type of bacteria responsible for infections in hospitals. *C. diff* caused almost half a million infections in the US in 2011 alone.

So the one in seven and the one in four are the calculation based on the - the six drug resistant infections not including *C. difficile*. Next slide. So with every *Vital Signs*, we focus on a primary audience.

And for this one the main audience that we were targeting were doctors and nurses and other healthcare providers caring for patients.

Ultimately, our hope was to convey that clinicians have the power to change the direction of antibiotic resistance nationally, really each and every time their patients come into a healthcare facility, and that they care for those patients.

And so part of the way we were making that connection for folks was to point out three critical steps that we thought clinicians needed to take with every patient, every time. That each could play a role in driving antibiotic resistance nationally.

And those three steps are prevent infections related to surgery and replacement of catheter. So preventing the infection from developing to begin with. Prevent the spread of bacteria between patients.

So you'll recall, last year we talked about the coordinated approach, so - and the role that bacteria is spreading not just between patients but also between facilities in a region that that could be driving resistant infections. And also improving antibiotic use through stewardship. Next slide.

Of course clinicians cannot do it alone and we all really appreciate the fact that state and local health departments play a significant role in the success of preventing healthcare-associated infections including preventing antibiotic resistant infections.

So we also made sure to include some of the things that we have seen states doing and leading to success in - in making an impact in the state.

So some of the examples included when talking about preventing infections and their spread, things like setting goals for your state, monitoring your state's progress in preventing infections, using some of the healthcare-associated infection data, promoting action.

We see a lot of states doing that through collaboratives and things like that. And - and also keeping minds toward achieving regional prevention, recognizing that each of you at the state are impacted by your neighbors and

other states as patients move not just between facilities but also from state to state.

And then we've seen a lot of states play a role in improving antibiotic use and supporting stewardship efforts and knowing antibiotic resistant patterns in their area. Next slide.

The other thing that we released last week that we wanted to point out to you, are a couple of tools that we think not only clinicians but also state and local health departments, can use to find data and speed progress that also leads to action.

So one of those was at the same time as the *Vital Signs*, we released a national and state healthcare-associated infection progress report. This is the progress report that CDC releases annually, looking at CLABSI, CAUTI, SSI as well as *C. difficile* and MRSA lab identified events in acute care hospitals.

We also released an antibiotic resistant HAI patient safety atlas. And if you haven't checked that out, go to our web site and it's an opportunity for you to look at the resist - percent resist - resistance of about 31 phenotypes or bug drug combinations that are playing a role in healthcare-associated infections.

And you can look at those at the national level, the regional level and the state level. And then also we wanted folks to be reminded about the targeted assessment prevention strategy or TAP, which my colleague Carolyn Gould, is going to talk a little bit more in detail, about. Thank you. Carolyn?

Dr. Carolyn Gould: Thanks Nicole. So I am moving to slide 12 for those of you following along. So as Nicole said, I'm going to be just talking briefly about the CDC's targeted assessment for prevention strategy.

And then after I give a brief overview, you'll be hearing from a couple of states who have really made some tremendous impacts implementing the TAP strategy. So slide 13 - the - just the basic - the basic structure of the target assessment for prevention strategy is presented on the slide.

So as the acronym implies, it's targeting, it's assessing and it's preventing. It's a linear progression framework for quality improvement. So the first step, there are these three steps to the TAP strategy.

The first step is targeting the facilities and even the specific units within those facilities that have the highest burden or excess of healthcare-associated infections. And I'll talk about what we mean by excess.

The second step is to assess the gaps in infection prevention in those targeted facilities and in the specific units. And then finally, what we all want to do is prevent infections by implementing specific interventions to address those gaps. So it's a very customized, targeted approach. Next slide.

This is just a screen shot of the - the TAP web site where we are putting up all the tools that can help facilitate implementation of the TAP strategy. There are links to the NHSN technical documents, how to run TAP reports.

As we develop tools and work with our partners, we are going to continue to put them up on this web site. There's a great example of a letter that Wisconsin is going to talk about, that we have up on the web site.

And - and so any of those tools from states we welcome to - if you're willing to share, to put them up here and - and use them as a model for others. Next slide.

So just briefly I just want to introduce, if you haven't seen this already, the metric that is really central to the targeted assessment for prevention reports or TAP reports. It's called the cumulative attributable difference or CAD.

And it's related to the SIR, the standardized infection ratio in this formula you can see here. The CAD is the observed number of infections minus the predicted number, times an SIR goal.

And so what the CAD becomes really is it translates that SIR goal into the number of infections needed to be prevented to reach that goal. The NHSN uses the HHS national goal SIRs with an option to customize in those reports.

So if you have already reached the national goal for example, and you want to exceed that goal, you can put in a lower SIR target for example. The lower your goal SIR, the larger your CAD will be as you can see by the formula.

And that will give you a larger what we're calling excess number of infections above that goal. What we've learned, next slide, is - so this is just a figure basically, showing the CAD as a difference between the observed minus predicted number of infections.

So unlike the SIR which is a ratio, the CAD is an absolute number of infections to prevent. Next slide. I'm on 17. So this was the first publication of the TAP strategy and the CAD metric that our statistician, Minn Soe, published in infection control and hospital epidemiology.

So if you want to read more about how this was developed and sort of how it can be used, you can go to this reference. Next slide.

So what we've learned from the TAP strategy is that there are several benefits to using this metric and this strategy above and beyond, you know, looking at the data in other ways that we've traditionally looked at data. One is that it's a very focused approach to prevention.

It's been very useful to be able to map those infections to the unit level in these TAP reports. We've heard on multiple levels from states to healthcare facilities - healthcare systems to healthcare facilities that they love being able to see the infections occurring at the unit level in a very concise report.

It's a concrete prevention goal. So the CAD translates that SIR which might be hard to understand or conceptualize by some front line providers and by many people who, you know, aren't used to looking at ratios in terms of - of what they mean for prevention.

So they - we've heard again anecdotally, that people like the CAD because it's a very concrete prevention goal. And also that using some of the assessment tools that we've developed, you can identify specific gaps in infection prevention that might be leading to those excess infections.

And finally, it's been beneficial to implement strategies that are customized to address those gaps as a first step. It's sort of overwhelming to think about all the things you could potentially do to improve infection control.

But really try to customize your strategies to address the identified gaps, has been very effective. Next slide. So this is a screen shot of the TAP report. This is an example of a CAUTI TAP report. The top one is the facility level. And the bottom one is a unit level TAP report.

So if you're a group such as a state health department or another organization that has access to data from a number of facilities, you can actually run a TAP report of all those facilities and they will be ranked by the CAD metric which is sort of to the right of center in the TAP report, with the highest one being on top.

And then you can see that the report brings in a number of different data points from an HSN into one report, including device utilization, the SIR and the pathogen types for those infections.

So if you - if you look at the top facility you can actually - the second example at the bottom gives you, in that facility, that top ranking facility that has the highest excess of infections, you can actually look at where those excess infections are occurring.

So in this particular case, the critical care burn unit and the SICU, surgical intensive care unit, have the highest number of excess infections. So within that facility you could start your efforts by targeting those units that seem to be having the most infections. Next slide. I'm on 20 now.

So the facility assessment tools that we're creating and are already being used by many of our partners, can help identify the gaps in those specific targeted areas.

And we have tools developed for CAUTI and *C. difficile* infection and we're currently developing one for central line-associated bloodstream infection. So those tools we can make available to you if you're interested in using them and you haven't - and you haven't used them yet.

Next slide. So the third step is the prevent step. So we've also developed some implementation guides that are meant to be paired with these assessment tools.

So once you identify areas for improvement, you can go to these tools which will link you to many tools that already exist that are freely available to the public, that are organized in such a way that you can really go directly to the type of tool you need.

So this example, if you just look at step one, this is facility assessment, just two examples of - of two questions about one having a nurse champion for CAUTI prevention. And the second one, having a physician champion for CAUTI prevention.

There were about 100 plus responses to these questions in a given facility. And about 50% of people felt they had a nurse champion and only 15% felt the facility had a physician champion.

So what this - this quality improvement organization did was they went to the implementation guide and looked at some tools about strategies for - and tips for physician engagement. These are tools that were already created and are on the CatheterOut.org web site.

And recommended that the facility implement some of these strategies to engage physicians in the process for CAUTI prevention which we have learned is extremely important, in order to make things like nurse directed removal protocols work.

The nurses need the support of physicians to - to implement these strategies. So that's just one example of a common gap that we've seen and a way to address that gap. Next slide. We have a couple of how to guides.

So if you kind of want to know - you want to have a step by step guide, how do I implement the TAP strategy either from the group user level or from an individual facility level, these are already up on the web site. This is just a screen shot of the group user how to guide.

It's a very easy to follow step-by-step guide going through the three steps of the TAP strategy. So that is - that is all I'm going to present now. I'm going to turn it over to Ashley Fell from the Tennessee Department of Health.

And then after that, Wisconsin's going to present how they've implemented the TAP strategy. Thank you.

Ashley Fell: Thank you Carolyn. Good afternoon. And thank you for the opportunity to share Tennessee's experience implementing CDC's Targeted Assessment for Prevention strategy in our healthcare-associated infection prevention work. Next slide - and I'm on slide 25.

This slide summarizes Tennessee's HAI data from the 2013 CDC HAI state progress report. By 2013 Tennessee hospitals had made significant progress in preventing certain types of HAIs, particularly central line-associated bloodstream infections or CLABSI.

Yet we identified a couple of key areas where we weren't making progress as quickly as the rest of the country. Catheter-associated urinary tract infections or CAUTI in intensive care units and MRSA bloodstream infections.

Recognizing that we needed to take a different approach in targeting our HAI prevention efforts, we implemented the targeted assessment for prevention or TAP strategy, to target facilities for our prevention efforts. Next slide.

Looking more closely at our CAUTI data in 2013, we applied the TAP strategy to identify facilities with the highest number of excess infections. We found that the top five facilities with the highest number of excess infections comprised about 50% of Tennessee's excess infections overall.

If we targeted these top five facilities with prevention efforts and they were each able to meet the HHS standardized infection ratio or SIR goal, of 0.75, Tennessee's SIR would decrease from 1.38 to 1.0.

Alternately, if we had targeted facilities with the top five highest standardized infection ratios or SIRs, and these facilities were able to prevent every single one of their infections, Tennessee's SIR would only decrease to 1.17. Next slide.

Before I get into the details of how we use the TAP strategy in Tennessee, I wanted to share our data from the more current 2014 CDC HAI state progress report. As you can see here, there are fewer red arrows on this page.

Tennessee's overall CAUTI SIR is nearly the same as the national SIR, instead of 24% higher as it was 2013. Next slide. This slide shows a screen shot of Tennessee's facility specific HAI prevention progress report card. This information is distributed to each hospital every quarter.

This report was developed during an iterative process with our multidisciplinary advisory group on HAI and from input from hospital leadership. This table has been refined over time and this is the most current version.

To walk you through the report, the first two columns labeled A and B, list the type of HAI and the specific location or type of procedure. The next two columns, labeled C and D, list the facility standardized infection ratio or SIR and the 95% confidence interval.

You'll notice that these values are sometimes highlighted in red or green which shows whether the SIR is significantly higher or lower than the national baseline SIR of one.

Moving across the table, the next two columns labeled E and F, under number of infections, display the actual number of infections the facility reported, as well as the number of infections that the facility must prevent to reach the SIR goal. This is the CAD value.

Then in the column labeled G, we list the goal SIR. Then next to H, Tennessee's SIR for that quarter. And finally, in the last column, I, we indicate whether the facility was one of the top five highest facilities for preventable or excess infections.

If you look across the second row for this facility, labeled J, you'll notice that their CAUTI SIR in adult and pediatric wards, was 0.82, less than one. Even though their SIR was not statistically significantly higher than one, they were still one of the top five facilities for the most preventable infections.

Meaning they had one of the highest CADs in the state. We began distributing these reports to our acute care hospitals in late 2013. Next slide. While these report cards update facilities on their progress each quarter, they are static reports.

In order to provide facilities with a way to check their progress in between report cards, we developed an HAI prevention calculator that is available on our web site, for facilities to calculate their excess infections at any time.

The prevention calculator is interactive, allowing facilities to select the desired type of HAI or even set a custom target SIR goal. Next slide. After selecting the type of HAI, facilities enter a little bit of their own data.

They enter the number of infections they observe and either the number of predicted infections or their current standardized infection ratio. Next slide. Then the calculator shows the number of infections that need to be prevented in order to reach the target SIR. Next slide. Slide 32.

This slide shows Tennessee's CAUTI data in ICUs from 2012 onward, by quarter. At the end of 2013 we began implementing the TAP strategy through the prevention report cards and promoting the use of our HAI prevention calculator. Next slide.

This table shows the SIR and CAD values for the top five Tennessee hospitals, ranked by CAD, in 2013 and their performance in 2014. These five facilities decreased their CAD by an average of 12 infections between 2013 and 2014. On average, the facilities decreased their CAD by 40%.

Next slide. This slide shows Tennessee's CAUTI data from ICUs. In 2012 Tennessee's CAUTI SIR was 1.46, compared to the national SIR of 1.09. In 2013, Tennessee's SIR decreased to 1.38, getting closer to the national SIR of 1.18. In 2014 Tennessee's SIR is 1.23 compared to the national SIR of 1.16.

For the first time, Tennessee's SIR was not statistically significantly higher than the national SIR. Tennessee's state rank also improved in 2014. Moving from 44th and 43rd in 2012 and 2013, to 34th this year. Next slide.

This slide shows the distribution of state SIRs for CAUTI in ICUs in 2012. The Y axis shows the number of facilities reporting in each state while the state's standardized infection ratio or SIR, is displayed on the X axis.

In 2012 Tennessee, shown by the red circle, was among the states with the highest SIR. Next slide. This figure shows the same thing in 2013. You'll notice that the red dot for Tennessee has moved a little closer to the middle of the distribution but is still on the higher end. Next slide.

And finally, this is the same thing for 2014. And here Tennessee has moved much closer to the middle of the distribution. Next slide. Slide 38.

While we are making progress in preventing CAUTI in ICUs, we have begun using the TAP strategy to target long term acute care hospitals for prevention in the same way.

Tennessee's SIR for CAUTI in long term acute care hospitals, was 1.43 in 2014, significantly higher than the US overall SIR. And Tennessee's SIR ranks the second highest of the states in the US.

In addition, 60% of Tennessee's long term acute care hospitals have a higher SIR than the national. For CLABSI performance in our long term acute care hospitals was similar, with an SIR of 1.3 compared to the national SIR of 0.91.

In order to better target Tennessee's long term acute care hospitals, we began distributing these prevention progress report cards to the long term acute care hospitals, mid 2015. Next slide.

In addition to the prevention progress report card and HAI prevention calculator, we have recently used the TAP strategy to select facilities for infection control assessment.

We identified those acute care hospitals and long term acute care hospitals, for infection control assessment based on the highest number of excess infections. Next slide.

We also implemented the TAP strategy to identify hospitals in associated nursing homes, for our *Clostridium difficile* or CDI prevention collaborative. We compared the theoretic impact of three different strategies in reducing the total burden of CDI.

That is community onset and hospital onset for two scenarios. One, recruiting five facilities and the other, recruiting ten. The number of C. diff infections prevented are shown on this slide, if facilities reach the HHS goal of 0.7 for hospital onset, and eliminated excess community infections from nursing homes.

Using a weighted CAD, had the largest impact on prevention while utilizing the community onset prevalence had the least impact. Again, this highlights how using the TAP strategy in a setting of limited resources, can prioritize efforts to have the greatest impact. Next slide. Slide 41.

In summary, we've embraced the TAP strategy in Tennessee for several reasons. We feel it has the greatest return on investment by targeting facilities with the potential to prevent the greatest number of infection.

We've - we've also found that the number needed to prevent or CAD, is easily understood by our partners and front line staff. Instead of talking about reducing rates, or SIRs, we talk about preventing a concrete number of infections.

The TAP strategy can also be used among small facilities, even when there isn't enough data to calculate a standardized infection ratio.

So far, Tennessee has used the TAP strategy for facility prevention progress report card, the HAI prevention calculator, to inform facility selection for our *C. difficile* prevention collaborative and to identify facilities who would most benefit from an infection control assessment through the ICAR program.

Once we identify target facilities we collaborate closely with our partners, such as the Quality Improvement Organization and State Hospital Association, to assure that these facilities receive the support they need to reduce HAI.

Thank you for the opportunity to share Tennessee's experience implementing the TAP strategy. And now I'm going to hand the call over to Ashlie Dowdell.

Ashlie Dowdell: Thanks Ashley. I just want to spend a few minutes talking about our experience with the TAP reports and specifically how we're using that data for prevention in Wisconsin. I'm starting on slide 43.

So we've had a very strong collaborative relationship with our hospital association and our QIO – (QIN)-QIO over the years, particularly with the HAI prevention program. We're regular participants in the HAI advisory committee.

We've set up an executive committee with those three organizations, to have regular check-ins and we really do bounce ideas off of each other and support each other's projects.

The way that that has really developed into roles is that the Division of Public Health takes on the data and the NHSN support while the hospital association and the (QIN)-QIO are really more on the prevention end of things.

We met last summer as part of these regular meetings and it was just brought to our attention by our QIO, who was actively recruiting for their latest phase of prevention collaboratives at that point, that they really weren't having quite the impact in enrollment that they were looking for.

And they were nearing the end of that enrollment period. So we in the past, sent out individualized NHSN data reports. And we talked about sending out something with, at that time, the newer TAP report.

So what that developed into is a TAP letter that was sent to 36 hospitals if at least one target area had a cumulative attributable difference or a CAD, greater than one. And this was across the three areas that NHSN had built in TAP reports - CLABSI, CAUTI and C. diff. Next slide.

The audience for these letters at these 36 hospitals, were infection preventionists, hospital administrators, quality directors and chief nursing officers.

The letter came from our state epidemiologist for communicable diseases and we really felt that these specific staffing roles were very important towards driving the message to the hospitals.

We learned from some of our key partners that in particular, the chief nursing officer, was very important toward that hospital taking in these projects, because they were helping to allocate the staffing time on the unit for some of these prevention activities.

So that was really an important place for us to start hitting that message, rather than just our traditional quality, sometimes infection prevention and administration.

These individuals through the letter, were encouraged to join a prevention collaborative led by the state QIO, (QIN)-QIO and hospital association. Next slide. So the results of the letter, and I will point out that this happened in a very quick period of time.

The letter went out in mid-July last year and our QIO needed to submit their participant count by the end of July. So this is a very quick timeline. And in that time, in about two weeks, they had a pretty dramatic increase in the number of hospitals that were confirmed.

So before the letter the QIO had an overall number of hospitals committed as 11. And that went up to 27 after the letter. CLABSI - the CLABSI project went from 1 to 7. CAUTI went from 4 to 11 and then C. diff again neared that overall number, from 11 to 27 hospitals.

So we were really happy and really excited about the response that came in from that letter. Next slide. The impact of the letter, you know, we really do give some credit to this - this particular communication. It seemed to give an extra push to our other hospitals.

The QIO anecdotally spoke to many of them and has been working on recruitment with them over a period of time. And there were many that were interested at different levels of the staff. But they just couldn't quite commit the resources. There was always some kind of a hang-up.

But seeing the data in black and white, seeing that preventable number of infections and seeing how that really looks in a concrete way, did seem to push them towards the prevention collaborative and seeing that they could really use some help with some of those resources that were being offered.

This also helped provide greater administrative support because again, we reached into a couple of different administrative levels of staff, quality and infection prevention. This also seemed to bring in some of the larger hospitals and systems in the state.

So sometimes some of the larger hospitals don't tend to participate in prevention collaboratives. They have other resources. They have hospital system resources. They have other things that are happening. So this is really seen as one more way to bring them in. And we did attract some of those large hospitals that maybe were not planning to participate in - in the past. This also helped demonstrate some of our collaborative working relationship with state health department, QIO and the hospital association. We really made a strong effort over the last few years, to ensure that we're a united front.

It can become confusing and it has in the past, especially once the state health department got involved with HAI prevention through our - we had some projects and contracts that were sort of similar in some of the - the goals and the project topics that were being communicated.

And so - early on the hospitals would say but you're doing similar things and we need to be able to kind of align and make sure we have a common message. And that's really been something we have worked very hard on over the last few years.

And I think we have a very unified front at this point, to the point where now our QIO and hospital associations do run the prevention collaborative together essentially. They have collaborated very strongly on their tools, their visits. They've done onsite workshops together with the hospitals.

And I think that's really been a driver for some of the change that's happened in the state and some of the satisfaction from the - the hospitals participating.

The DPHN, like I said, we do focus a lot on the data and the NHSN side of things. And we are starting to use the TAP methodology to target SSI visits. So we have a prevention program that has started specifically for SSIs. We're going out into the facilities that we are requesting visits or that we are targeting for visits, based on performance. And we have an SSI consultant.

So he's working with the surgeons. We're talking through some of those interventions and TAP is one of the ways that we are able to identify those facilities that maybe haven't reached out to us but that we feel would really have an impact on the state SIR.

We're also regularly training on NHSN and TAP is the next topic for our monthly live webcast option, which are open to all of the facilities in the state. So we do a lot of training on NHSN reporting and analysis.

And this is really one that's just going to be coming up and has been of a lot of interest to the facilities, particularly because we have about half the hospitals in the state that are critical access and struggle with smaller volumes. And having a SIR calculated based on those small volumes.

So we see the TAP report as yet another way to really reach out to those facilities. And in the next couple of slides, they're listed as 44, 48 and 46, are just screen shots of the letter. So you can take a look at that if you're interested.

The letter is available like Carolyn mentioned, on the CDC Web site and the link is available on the slide that's marked 46 that has a Hospital A data table at the top. And then the last item that was in the letter, is a flyer marked as slide 47, with some information about the QIO and the contacts.

The hospital association, CDC, APIC, some of those resources that we really felt it was important for the facilities to take in as - while they were looking at these TAP reports and determining whether or not to be part of the project. And my contact information is there for anyone who has questions.

And otherwise, I will hand the call back to CDC. Thank you.