

Vital Signs Town Hall Teleconference
Stop the Spread of Antibiotic Resistance and *C. difficile* Using a Coordinated
Approach for Action
Q&A
August 11, 2015
1:00 pm CT

Dr. Dan Baden: Thank you very much Gwen, and thank you all for the excellent presentations. As we get ready for our question and answer section, remember that you can get in queue to ask a question or to make a comment by pressing star one. Just say your name when prompted and the operator will announce you when it's your turn.

I encourage you all to take advantage of this opportunity to share your own strategies, lessons learned, challenges, and success stories. You can pose questions to our presenters or to each other. We've got over 300 people on this call from many states and organizations, so it's a good forum for you to discuss, collaborate, and share different methods, practices, and experiences on antibiotic resistance.

Also, if you have a question for a specific person, please go ahead and use their name or say "second presenter" or something along that line.

So at this point, Operator, do we have any - we're ready for questions. Do we have anyone in queue?

Coordinator: Yes. And your first question today comes from Patricia Babcock. Your line is open.

Patricia Babcock: I actually don't have a question.

Coordinator: Next question will be from David Burnbalm. Your line is open.

David Burnbalm: Good morning. So these are really excellent presentations with important initiatives. Going back to one of the first statements in terms of knowing the antibiotic resistance threats in the area and the state, and to my mind also how they're getting there, how they're emerging, where they're traveling from -- I think these presentations also underscore that this requires genotypic not just phenotypic characterization.

In my mind, that should be done in real time and coordinated with resources like the McMaster Carr Database. So my question is whether or not any of the anticipated American, federal or state initiatives plan to connect with McMaster's Comprehensive Antibiotic Resistance Database or something similar.

Dr. Scott Fridkin: This is Dr. Scott Fridkin at CDC. I can answer generally that the antibiotic resistance initiative that's outlined in the President's budget initiative does have dedicated resources identified for ramping up regional laboratories that would perform in some capacity that type of work. The works' not specifically defined, but the concept of using advanced molecular diagnostics and genotypic typing to understand the epidemiology and the spread of a particular resistant pathogens, and provide support to multiple states within their region is a definite centerpiece of that AR initiative.

So I can't answer specifically tied to that particular database, but the concept of ramping up regional laboratory support to back up the state health departments as they process isolates from new and emerging pathogens that come - that are identified.

David Burnbalm: I think that's a terrific initiative and certainly when I was working in Washington State we were hoping that Washington State would become one of those centers. But I would also encourage you in the future planning - the data produced, the information produced from those laboratories should go into something like McMaster Bioinformatics Database, which then can be accessed by anyone through a Web site on the internet.

So it's a question of producers and knowledge translators, and I would put Carr on the knowledge repository, knowledge translator end which I think might be a missing piece.

Dr. Scott Fridkin: Thank you.

Dr. Dan Baden: Alright, great discussion too. So do we have another question in queue?

Coordinator: Yes. Next will be Philip Letter. Your line is open.

Dr. (Boston): I am an infectious disease doctor in Boston. I have a question about electronic medical records and EPIC. Specifically, EPIC has been rolled out in so many different health facilities across the United States and they have this system called Care Everywhere, which apparently patients when they go from facility to facility information can be transferred with them. And I'm wondering if Care Everywhere and EPIC has been used by any of the states? Thank you.

Dr. Dan Baden: I'm going to just defer, I think, and see if as it relates to maybe the registry at least, - Erica, if you have any familiarity with how some of the electronic health records are utilized to help populate that type of registry?

Erica Runningdeer: Unfortunately a lot of electronic medical records - the pieces and components don't speak to each other or don't have a standardized format to really have that kind of interoperability. I will tell you from personal health experience where I received my healthcare, I have - they also use EPIC and have something called My Chart where I can even look up my own lab results and my own aftercare summaries and that sort of thing.

It would be great if we all had a universal record where all these different systems hooked together, but the fact is a lot of healthcare facilities even if we're having a lot of mergers between different healthcare systems going on in Illinois, the last couple years especially. And even if they all have EPIC, they all have different versions. They have modules. The modules might integrate or not.

So there's still a lot of custom system IT building that has to happen. And so the IT infrastructure piece of this is a really, really critical component that I think needs a lot more investment to make it go.

So when we first did the XDRO registry, Mary Driscoll, our chief of the division of patient safety and quality, said this is one piece of a universal healthcare record to make sure at least this is communicated consistently across healthcare systems that might not have medical records that can speak to each other.

I hope that addressed your question.

Dr. Dan Baden: Marion, do you have any experience at all in Tennessee with trying to link up reporting, maybe even to NHSN or your system?

Marion Kainer: Not specifically on what the caller asked with regard to EPIC. This Care Everywhere - we have not seen it. We'll explore that. We are currently surveying our healthcare facilities to get a better understanding of their health IT infrastructure with the view of reporting to the NHSN AUR module. So we will have a better idea of what systems are in place to explore that server.

Gwen Borlaug: This is Gwen in Wisconsin. To answer that, we have not explored that either although that's something we're thinking about in the future with our health information exchange that we do have in Southeastern Wisconsin, which would be our target area.

We do know that most hospitals in southeastern Wisconsin do use EPIC and they are using the electronic transfer form. Some of them have uploaded that onto their EPIC system so that they can electronically place that information about CRE or any other MDRO's on the transfer form so that it does get to the next facility.

But that's as far as it's gone in Wisconsin.

Dr. Dan Baden: Okay, great. Do we have another question in queue?

Coordinator: Yes, next will be Leticia Houston. Your line is open.

Leticia Houston: Yes. This is for Erica. Erica, On your XDRO program that you're using, it's a very good program as far as the automated alert for surrounding the hospitals for the infection control preventionists. My question is - is this a

local program only in Chicago? Or is it accessible to other states? We're in Texas.

Erica Runningdeer: It's statewide. I know that we've had other states express interest in the registry and we've had calls with a number of them. But I can't - I'm looking around at my colleagues to see if anybody has a number, but I can think of at least six states that we've talked to about it.

And it also depends on - it's not something that I think we could necessarily roll out of one system the way it is. I know that our reporting definition of CRE had a lot of input from our advisory council. And so really specific pieces of how CRE —how the surveillance definition for CRE might vary by state as well.

So that's something to take into consideration, but we're definitely interested in chatting with people that are interested.

Dr. Scott Fridkin: This is Dr. Scott Fridkin at CDC. I just want to add the - regarding the registry, although this is a tool that Illinois has used and the success and effect of that is something that's - they're evaluating in an ongoing fashion, there is data that exists that health departments can gain access to take some steps towards identifying hotspots of resistance. Most hospitals in the US are reporting MRSA bloodstream infections to CMS through NHSN and reporting on *C. difficile* infections through NHSN to CMS as well.

And as I think was identified as well in Wisconsin, there are systems in place. The lab ID event reporting for CRE that can be helpful for identifying hotspots of CRE through the NHSN MDRO and CDI module.

So there are data sources available without having to build. We don't have an expectation that to get a coordinated approach going a new system needs to be built. I just wanted to emphasize that.

Dr. Dan Baden: Alright. Operator, any more questions in queue?

Coordinator: At this time we have no questions. But as a reminder, you may press star one if you would like to ask a question.

Dr. Dan Baden: And it doesn't just have to be a question. It can be comments, it can be sharing stories of what you do within your own organization or state. Or just to start more dialogue.

But I've received a couple of other questions. I don't think this one has been answered yet, but for Erica, is the XDRO registry a secure system and how do you ensure that only authorized people can see the patient data?

Erica Runningdeer: Thank you. So in Illinois we have a Web portal for IDPH and there's a number of different applications that healthcare institutions might need to access. And in order to gain access to the portal they have to fill out a security form. They have a person within their facility that's designated to say I approve them, they really do need access to this application.

And then so they go through a security process with the Department of Public Health in the State of Illinois. So it does take a little bit of time to get somebody a user name to get into the system. If they already have access to the NEDS reporting system, it was a lot easier because everybody that reports to NEDS pretty much would also need access to XDRO and already has security clearance.

And then the team at the CDC Prevention Epicenter developed this one-way hashing algorithm where it basically encrypts the data in a certain way. And forgive me, I don't know the technical speak of this, but when data is transmitted it is encrypted in such a way that it's protected and...

Dr. Dan Baden: Okay, thank you very much. Any more questions in queue, Operator?

Coordinator: Yes. Next we have Elizabeth Zaeed. Your line is open.

Elizabeth Zaeed: Hi. This question is sort of for Erica, but maybe for everyone. Do you get any pushback when you're reporting your data that some of the CRE that's being reported is not carbapenemase producing? Any pushback that *Enterobacters* are maybe not CP-CRE and so the numbers are looking higher in certain areas than they really should be?

Some of our hospitals respond that way. I'm just curious if you guys have heard that and whether you recommend that all hospital labs are using confirmatory testing.

Erica Runningdeer: So in Illinois I can tell you that we're currently wrapping up a validation project where we had the laboratory send a number of isolates that were reported to the registry. We had them actually send the isolates to us so that we could test and see with molecular testing if it truly was a carbapenemase producer to make sure that what's being reported to the registry truly is the definition and that it wasn't incorrect reporting going on.

So we don't have results of that yet but we will soon.

Elizabeth Zaeed: You're testing all isolates that come in?

Erica Runningdeer: No. The validation study is a special project. I believe we had five isolates per lab that they're sending in, but our state lab doesn't really have the capacity to do molecular testing for CRE. So we're eager to see those regional labs get set up.

Elizabeth Zaeed: Thanks.

Dr. Dan Baden: Okay. I've received another related question for Dr. Kainer. What has been the biggest challenge in making CRE reportable?

Marion Kainer: I think many of the challenges that we faced early on have now actually been resolved. The definition is a lot simpler now. The FDA and CLSI break points, which are now harmonized - one of the biggest issues that we've faced was extracting the data out of the NEDS Base system. They are very complex parent-child relationships within organism and susceptibility data.

We have now been able to extract that data and analyze those data. Electronic laboratory result reporting is a challenge for many facilities just because of the format of the organism and susceptibility data, and then making sure that there is both the quantitative result of the actual MIC value as well as the qualitative interpretation result whether it's resistant or susceptible.

Dr. Dan Baden: Okay, thank you. And I guess a follow-up question -- are you willing to share the code that you use to extract that data

Marion Kainer Yes. We're cleaning it up to make it a lot more easily interpretable. But as we're working on creating analyses, we'll be more than happy to go and share that with other jurisdictions.

Dr. Scott Fridkin: This is Dr. Scott Fridkin, CDC. I just wanted to back up a little bit. I think a tangential point to the previous question about concerns of over-reporting CRE that may not be carbapenemase-producing CRE.

And I think what we've learned from experience and working with several states and large regional areas is until there's sufficient knowledge gained about exactly what types of CRE are circulating in the hospitals, it's very important to take a look at the whole picture. And we really urge health departments to consider using the CSTE definition as it is right now, which is reasonably sensitive and reasonably specific to identify carbapenemase-producing CRE. Follow that up with some type of confirmatory testing and gain a better understanding of just what fraction of your CRE is carbapenemase-producing.

And I think only after that's done could you then better tier your approach to infection prevention appropriately to handle the burden of responding to CRE that might not be carbapenemase-producing.

Marion Kainer: And this is Marion. If I can add to that, our hotspot area where we have *Enterobacters* - a lot of them are actually carbapenemase-producing. So - which we were surprised about the proportion of those that are carbapenemase producers.

Gwen Borlaug: This is Gwen in Wisconsin if I could add to that as well. Of course we use the NHSN definition and now that *Enterobacters* are included, we do have a lot

of *Enterobacters* and most of ours are not carbapenemase-producing. But we keep in mind that we still want a response from the infection preventionist that those non-carbapenemase producers that are carbapenem-resistant - we still want those patients isolated.

And so we are fortunate in Wisconsin also to be able to differentiate genotypically because our clinical lab requires to send the specimens that are non-susceptible to state labs. And then they do the carbapenemase testing by PCR. So we're able to differentiate the ones that are resistant by another mechanism to those that are carbapenemase-producing.

And we parse that out in our data as well.

Dr. Dan Baden: Alright. Any other discussion on that? We love having a lively debate, so this is great.

Okay. If not, since time's starting to get short, I've got a couple more questions that seem to be focused on coordinated approaches. And one, I think this is for Dr. Fridkin. What are some of the first steps a health department should do to lead a coordinate approach in their area?

Dr. Scott Fridkin: So I would think you'd refer back to one of the slides. I'll figure out what number it is in a sec. but clearly I think the most important thing is to identify the healthcare facilities in the area, and how they are interconnected, how patients move between those healthcare facilities. And try to map that out.

Second is to work with CDC to gain access to existing data around antibiotic resistance and use that data for action to better prevent infections and

improve antibiotic use. There's also ways to try to promote getting better data than what is in their hands right now.

Third is to dedicate staff to improve connections and coordination with healthcare facilities in the area. And fourth is know the antibiotic resistance threats in the area and throughout the state.

And that was Slide 10.

Dr. Dan Baden: Alright, wonderful. And I guess a follow-up question for either Scott or Gwen -- what would you say are the biggest benefits from these regional collaboratives? And conversely, what would happen - what would have been difficult or impossible without them?

Gwen Borlaug: Well, this is Gwen. I'll answer that. I think one of the biggest benefits of the regional collaboratives in addition to the communications that could go on across multiple healthcare facilities is that we use that southeast regional collaborative to create our toolkit. So we really took the CDC toolkit and operationalized it. So this was a group of healthcare facilities that had experience with CRE at that point.

And so we made it a very practical toolkit. We had templates for a policy for CRE policies so infection preventionists didn't have to start from scratch with the policy. We had directions on how to collect rectal swabs and send them into state labs. We rolled out scripts as to how you would talk to patients when they have this positive CRE result or when we had to collect a rectal swab from them.

So we really have a lot of tools and templates, including a checklist to prepare for cases of CRE. That came out of that group and we couldn't have done that in the state health department or even the city local health department because we're not the ones out in the trenches caring for the patients. This had to come from the facilities themselves.

So I really think we developed a really practical toolkit because we had that collaborative.

Dr. Scott Fridkin: This is Scott. I would just say I think the biggest benefit is the sense of shared responsibility, shared ownership of the problem, and shared success. I think getting facilities to work together with the health department.

Dr. Dan Baden: Okay, wonderful. So that's our time for today. But before we close, I'd like to ask you all to take a look at Slide 44. The Prevention Status Reports or PSR's that you'll be able to find on Slide 44 -- this highlights for all fifty states and the District of Columbia the status of certain policies and practices designed to address ten public health problems, including healthcare-associated infections.

The PSR's pull together information about state policies and practices in a simple and easy to follow format that decision makers can use to examine their state's status and identify areas for improvement. There's a link directly to the 2013 healthcare-associated infections on the *Vital Signs* town hall conferee web page. Or you can visit the link at the bottom of Slide 44 to see all the PSR's by state or topic.

Finally, please let us know what we can do to improve these teleconferences. Email your suggestions to ostltsfeedback@cdc.gov. That's O-S-T-L-T-S

feedback —all one word— @cdc.gov. We hope you'll be able to join us for next month's town hall on Tuesday, September 8, when we'll focus on heart age.

Thank you to all our presenters and everyone who attended this call. That ends the call. Goodbye.

Operator: This does conclude today's conference. All parties may disconnect at this time.

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