

CENTERS FOR DISEASE CONTROL AND PREVENTION

Moderator: Jim Crockett
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Coordinator: Good afternoon and thank you for standing by. For the duration of today's conference, all participants' lines are on a listen-only mode until the question and answer session. At that time, if you would like to ask a question press star one.

Today's call is being recorded. If you have any objections, you may disconnect at this time. It is my pleasure to introduce Mr. Jim Crockett, State Coordination Task Force Lead at the CDC. Thank you, sir. You may begin.

(Jim Crockett): Thank you (Holly) very much. So good morning, good afternoon to all of y'all depending on your time zone. As you have mentioned, this is Jim Crockett, Division of State and Local Readiness for the State Coordination Task Force here at CDC in Atlanta. So welcome to the Sustained Zika Response in 2017 Vector Issues National Webinar.

Invited participants, as we know, include our state health officials, state, local, and territorial preparedness directors, epidemiologists, laboratory staff, vector participants - anyone who participates in vector-related activities in their jurisdiction. We are aware the invite's been shared, and we hope it has been shared with an extended audience.

We're going to ask if you represent the formal media or press, we're going to ask you to disconnect at this time. Really want to focus this discussion on the structured public health and vector control participation.

So the intent of today's webinar is to provide a brief vector issues -- vector control overview session on Zika-related response and preparedness activities, and then really transition to a two-way discussion that will follow after initial comments by Janet McAllister.

So following today's webinar and this - later this week there'll be four remaining webinars to follow. Those will focus on public and private partnerships, pregnancy and birth defects, blood safety, and our medical investigations team -- primarily our CDC Emergency Response Team.

So keep in mind, we are continuing to update our guidance as we learn more through research. And our Zika preparedness -- or Zika response plan -- is also being updated at this time. The following today's presentation's question and answer segment, if you have any additional questions, as usual, feel free to email us at preparedness@CDC.gov.

Again, preparedness@CDC.gov.

So today our - really subject matter expert leading our presentation on the vector issues topic will be Dr. Janet McAllister. Dr. Janet McAllister is a board-certified medical entomologist. She did her PhD - thanks Janet -- at University of Arkansas, her postdoc at LSU and CDC here in Atlanta. She worked 5 years for the New Orleans Mosquito Termite and Rodent Control Board.

She currently works at CDC - with CDC - was at least home-based in Fort Collins, Colorado, where she participates in emergency response activities and conducts research on insecticide resistance and vector control. Dr. McAllister is a professor at Tulane University in New Orleans and a faculty affiliate at Colorado State University in Fort Collins.

Dr. McAllister's a past president of the American Mosquito Control Association, West-Central Mosquito and Vector Control Association, and Louisiana Mosquito Control Association. Dr. McAllister is currently our vector control team lead for the CDC - virus at CDC. Without any further ado, Dr. McAllister. If I can turn it over to you, please ma'am. Let you introduce your team. Welcome Janet.

Dr. Janet McAllister: Okay, thank you Jim. And I want to echo good morning or good afternoon depending on where you are currently situated. I have asked several members of our team to join the call. John-Paul Mutebi, - (Dr. John-Paul Mutebi), Dr. Harry Savage, Jeff Borchert, and Amy Fehringer-Tschopp.

Jeff hopefully will be able to dial in, if you have questions later on, regarding any of our ELC grants. Hopefully he'll be able to answer those questions. And Amy is our tech support for the new MosquitoNet. So I'm not certain if either of those two individuals are actually on the line. But with that I'm going to jump in with some updates on the Zika guidance, and then we'll get right into those questions and answers. Next. Next.

So our Zika CDC Interim Response Plan is a living document and, once again, it is being updated. And while our designations in the plan of stage or phase level terminology is going to be adjusted, vector control and surveillance activities pretty much remain the same. They really fall into a preparation phase and a response to any suspected or confirmed cases.

So within the new updates, when you see terms like suspected local case or widespread local cases that are confirmed, the vector response -- as far as vector control goes -- is really the same. But under some of those designations, some of the epidemiology activities, or lab testing activities may be different based on how many cases are being detected.

And so I just want to reiterate again that the vector control tools that we utilize in the United States are effective against *Aedes aegypti*. It's just a matter of the scope of what you might be doing. So for the preparation part of it, if you don't already have a plan of action -- and hopefully everybody has a plan of action -- they are looking at that plan of action and updating it.

And again, besides just -this is the vector control actual work we're going to do; that that plan include things like who are the key partners that might be identified? What lines of communication have been worked out between the vector control folks, between the epidemiologists, between emergency response? Are those lines of communication worked out? Has anything changed? Have people moved positions? Do you have some public-facing material developed?

The example on this slide are some of the mosquito control posters that we have available on our web page. But do you have things that have been developed for your particular jurisdiction? Do you have a trained workforce in place? And I'll get a little bit into that later. Have you exercised a plan?

So if the health department at the state calls you up and says, "Hey we think we have a Zika case," how are you going to work through the steps of identifying or communication with people locally to make sure that the vector control piece gets initiated? Do you have any prior knowledge of species distribution abundance and resistance status? And again, I'll talk a little more in-depth about that when I get into some of the ELC part a little bit later on.

And have you identified resources that you have in place that you might be able to leverage from surrounding mosquito control districts, or universities, or ag extension - all of the places within your state that might have resources

that you may be able to bring to bear if Zika virus does become locally transmitted in your area. Next slide.

So to address a little bit of the training. The AMCA has just posted some new best management practices. And CDC has funded the AMCA to come up with a training program for vector control. There - have just put on a course of master trainers up at their headquarters in New Jersey. These master trainers are going to be going out to 10 regional centers to do a Train-the-trainer event so that, regionally and locally, you will have people who are up on the best management practices of how to actually conduct mosquito control.

And then they can be pushing that information to people within mosquito control districts -- within environmental health programs, who may not do mosquito control day in and day out, or who may have very small programs with just one or two people -- to make sure that people have access to what the best management practices are that they should be following within whatever program they have.

They're also concurrently developing some web-based training and a certification program, which will be online soon. So if you're not able to make a live training, you should be able to at least access all of the information on doing best management practices for mosquito control.

And I would encourage everyone to visit the AMCA web page, which is provided in the last bullet. It's www.mosquito.org, and you can actually download their new best management practices manual that they have just recently posted. Next slide.

So again - while our Zika plan is changing a little bit of the verbiage on - you know, a phase one early mosquito season, late mosquito season - to be more in

line with whether there's a suspected local case or a single confirmed local case of transmission or travel-related cases - excuse me – basically, the vector control response remains the same. And that's to initiate vector control within a 150-meter radius of that suspected case or that confirmed case -- travel case, local case -- doesn't matter.

Now what we have learned from this last mosquito season is that the mosquito control techniques that many mosquito control districts already employ -- such as ULV spraying by truck -- can be effective against *Aedes aegypti*. Ground-based or aerially applied larvicides and adulticides are effective, as well as hand-applied adulticides and larvicides.

So which particular tool that a jurisdiction chooses to use in that 150-meter radius should be effective, as long as some sort of insecticide resistance testing has been done to show that the particular product that might be selected for use is going to be effective against local populations of *Aedes aegypti*. That's really the one caveat is that - if you're spraying something that's not going to kill the mosquitos because of resistance, then that particular vector control tool is not going to work.

So the same integrated approach - whether it's one case, small cluster, widespread cases - really it's the scale of how large of an area that you might be treating more than what the particular tool is that you might use. And the intensity of control in the geographic scale, again, it's going to vary based on the situation -- and that can change over time. So that you may start out thinking you have just a single case, but as epidemiology kicks in and more active case finding, more aggressive case-finding may occur. It may escalate from a single case to more widespread cases, which would mean that the response needs to adapt to the situation on the ground. And the same goes - as

no new cases are being found that the control activity and the intensity of those control activity would then contract and scale down as well.

So our surveillance and control on the web page really is not going to be changed much. There may be some tweaking in the terminology just to make it be more in line with our overall Zika response plan. And that will be looked at and updated as soon as the new response plan goes live. Next slide.

So I'm going to talk a little bit about the ELC funds because that's actually one of the ways that CDC can help more directly with vector control activities. And that really falls into surveillance for the mosquitos' insecticide resistance testing. And then there has been some money given to some states to do some vector control activities. Excuse me.

So the first wave of ELC money went out to support states in early August in 2016, and then some supplemental funds were given out in December of 2016. So for some jurisdictions, not a whole lot of surveillance could be ramped up last year. But, certainly, the funds are out there to be doing the surveillance for *Aedes aegypti* and *Aedes albopictus* in 2017.

And it is important to continue to look for *Aedes albopictus* even though no Zika was found in *Aedes albopictus* last year. There have been report in the literature of *Aedes albopictus* driving an outbreak in Cameroon in Africa. It is - certainly can be infected in laboratory experiments. And so, while we continue to think that *Aedes aegypti* is the primary vector in the United States, we cannot rule out that local transmission may not be maintained in *Aedes albopictus* in certain situations. And so we continue to emphasize that it is a potential secondary vector of Zika virus.

MosquitoNet was developed last fall. And this a web-based database where states are going to be able to input their surveillance and vector control activities that they are using their ELC funds to support. In January of this year, we started rolling out the MosquitoNet and enrolling end users for it.

States have a choice of whether the data going into MosquitoNet is going to be controlled by the state with just one entity or user putting in all of the information for the entire state; or whether the state is going to allow local mosquito control programs to input their own data directly. And that is varying by state to state.

And then we also repeated our survey of the distribution of *Stegomyia* species. And if anybody out there participated in our initial survey, we re-ran the survey in December. Next slide. Can you go to the next slide? I thought I had - yes, yes, this is the one.

So this is just a little bit of overview of *Aedes aegypti* from the February 2016 survey on the top, to the December survey on the bottom. We actually, just in that survey alone, came up with 38 new county records since the spring. Illinois and Alabama both added their first county records, where they identified *Aedes aegypti* last year, and this represents a 21% increase in reported - counties reporting the presence of *Aedes aegypti*.

And then 40 counties actually added additional year records where they found it, an additional year from what they had reported in the first survey. So if you go back - or go - yes, go back - and I'll just fill in the piece that we also distributed ELC funds to enhance insecticide resistance testing. And the data that we're going to be compiling is going to be used to develop more accurate maps and knowledge of when and during what time of the year both of these species are most prevalent in the US, and where they might be most abundant,

so that we can really further refine where risk of Zika local transmission may be in the United States.

So of course resources can be directed to the places at highest risk based on mosquito species, and also at the time of year when the greatest risk might be present, and also to define the extent of insecticide resistance in vectors throughout the United States. So next slide. And the next slide.

And this is just a summary. Go back one. This is the summary of what we found with *Aedes albopictus*: with 127 new counties - and a lot of these new counties are on the edges of the known distributions such as Kansas, western Texas - and then some states filling in because they didn't have a very good idea of where the species was in like Arkansas and Mississippi in particular. Next slide.

And this is just how an example of how one state used the ELC funding that they received last year to do some of this surveillance work, and what they found. So, based on the initial survey, 141 counties in Texas had documented these species,. And they have 65 counties that now have documented the presence of both species and 55 with *Aedes aegypti* only, and 21 with *Aedes aegypti* only. So they actually have a much more complete idea of where their - these species - throughout their state. So next slide.

And as far as insecticide resistance testing, we know insecticide resistance is a widespread, but it's a focal problem in that for, example, there's widespread - throughout the United States - resistance to the pyrethroids. But within a particular state or county or even within a particular city that resistance may not be uniform, in that there may be neighborhoods where you have populations that are totally susceptible adjacent to neighborhoods that have resistance to a particular product.

And so to get a handle on insecticide resistance, we made the choice to start with the easiest, most basic test for mosquito control districts to be able to do themselves, which is the CDC bottle bioassay. There are a lot of different assays that can be used to detect insecticide resistance, and it's not well-documented across the US. This flowchart to the right is kind of a suggested guideline on how to do resistance testing, starting with a phenotypic assay on your mosquitos, to see is there some form of resistance being expressed or not.

And then, depending on the results of that assay and using the WHO guidelines to break down what is resistant, what is susceptible, and what is developing resistance to suggest where you might go forward on figuring out what mechanism is there? Are - is - are the tools that you're using in the field still effective even though you are developing insecticide resistance - kind of an underlying resistance developing in a population?

We do plan, as this MosquitoNET develops, to expand the type of information that we are going to be asking states to provide, as they become more sophisticated with resistance testing; and might start picking up doing enzyme testing or molecular assays for looking for resistance genes behind the insecticide resistance being expressed. Next slide.

And so finally, the third piece of the funding for the ELC grants that went out are vector control activities themselves. And we really left that up to the states to request funding based on what was going on within particular states. But that money could be used to purchase traps and equipment for actual control. It could be used for purchases of chemicals. It could be used for supplemental contracts. It could be used to hire people for entomologic expertise or to supplement universities, so that they could provide entomological expertise.

But again, the actual specific activities that a state might have asked for and used the monies for is really up to the individual state. But because they are taking ELC money, they will need to report back to CDC on what activities they did use for vector control - what monies they did use for vector control. And so, that can actually help guide us going forward on how we might improve that piece of ELC funding, assuming that ELC supplemental funding for vector control will continue. So, next slide.

I believe that that is all I had to say, and that we can open it up for questions and discussion.

Jim Crockett: So Janet, thank you very much for that. I do appreciate that. What I'd like to do, Holly if you don't mind is open up for question and answers - really a two-way discussion. And we invite those on the call to please generate some questions so we can have that discussion.

But Janet, while she's queuing up the questions, I'll - let's give (Holly) a chance to talk. If you have anybody else on your team who wants to do any comments while we're gathering questions, that's - this would be a good time to do that. So (Holly), over to you for a minute.

Coordinator: Thank you. To ask a question unmute your phone, press star followed by the number 1, and when prompted record your name, so I may introduce you. To withdraw your question press star 2. Again, to ask a question - star 1. It will take a few moments for questions to come in. Please stand by.

Jim Crockett: So Harry or John-Paul), any things you wanted to bring to the table at this point? Now would be a good time, otherwise we can stand by for questions. Again, thank you Janet.

((Crosstalk))

Coordinator: And for...

Dr. Janet McAllister: I was...

Coordinator: Go ahead. Sorry.

Dr. Janet McAllister: I was going to say, "you're welcome, Jim." And I was just going to ask - real quick - if Jeff or Amy were able to join us? If they could shout out that they're on the line?

Jeff Borchert: Yes, hello Janet. This is Jeff Borchert. Just wanted to let you know I joined.

Dr. Janet McAllister: Okay.

Coordinator: Our first question comes from Marci Layton. Go ahead, your line is open.

Marci Layton: Hi, it's Marci Leighton in New York City. And I'm here with Sally Slavinski. We actually have two questions - both related to jurisdictions like ours, where we don't have *Aedes aegypti*, but we have *albopictus*. And though last year we did do aggressive control around *albopictus*, we are - were struck by the fact that we had a lot of cases so potentially many viremic people.

We definitely had a lot of *albopictus*, and we didn't see any evidence of local transmission or positive mosquitoes and really are thinking that, if there was any risk, we probably would have seen it last year and are leaning toward scaling back our response this next year. Continuing the surveillance but not being aggressive on the control unless something more concerning happens.

So we were wondering - I - we've heard about the one report from Africa -- Cameroon -- but is there really data to show that *albopictus* can be an effective vector to justify that level of response in areas where there's no *aegypti*? We understand it for the southern tier where there's *aegypti*.

Dr. Janet McAllister: So this is Jane. And you know,, thank you for your comment on that. Again, you know, in the laboratory it can be a competent vector. In - when it comes to outside of the laboratory of course, that's a big part of whether a mosquito poses a risk for transmission.

And we do recognize that *Aedes albopictus* in the field is much less important because it will feed on so many other things, besides humans, to maintain its populations. But the risk is not zero that just because last year you didn't have transmission events occurring -- that you know about -- that they could happen in future years. And so you know, you're going to have to really, I guess, decide how aggressive you're going to be in that mosquito control.

And remember that, you know, 80% - roughly 80% of the cases may not actually be presenting or that you would know about because they don't get sick enough to show symptoms or be tested. So I'd be uncomfortable saying, don't do vector control when you know you have lots of cases in an area and you have a potential vector in that area. But, how aggressive that control is, is something that, you know, maybe scaling back, and not sending boots on the ground doing house to house investigations for presence of mosquitoes, but relying maybe a little bit more on more widespread techniques, like truck-based spraying of the neighborhood or the several blocks around cases, because that ground to ground, house to house, boots on the ground people are very expensive to maintain that level of mosquito control.

Marci Layton: Okay thanks. You know, we do - I should acknowledge our - we have an amazing vector surveillance and control program. They do great jobs on both source reduction and larviciding.

And we also spray for West Nile. So obviously all that will continue. I think it's just the issue of adulticiding. How aggressive to be around adulticiding, knowing that we'll probably see less travel-related cases this year. And we're such a densely populated city so balancing risk versus benefits. So thanks.

Dr. Janet McAllister: Yes. And, you know, this is not a direct response to local cases, but what a lot of mosquito control districts actually do is do some intensive larviciding for mosquitos early in the season, so that they don't have to do as much adulticiding later in the season.

And while we don't have a lot of data on how *Aedes aegypti* is going to respond to that tactic, I think a lot of people this summer are going to be looking at their overall populations now that they are set up to do routine surveillance for this species - both *Aedes albopictus* and *aegypti*. And if there's anybody from a mosquito control district who wants to correct me on that, jump in or explain how you might be using that tactic.

Coordinator: Our next question comes from Richard Brooks. Go ahead, your line is open.

Richard Brooks: Thanks. Hi, this is Richard Brooks in Maryland. So first, thanks for your talk, and I would also second the comments from Marci and Sally in New York City. We're also struggling a little bit with how to parse sort of our findings that, you know, we also didn't see local transmission here. And we do have *Aedes aegypti* but at pretty low numbers.

So my question relates to your slide number seven where you mention doing vector control within a 150-meter radius of a case, but then also says that the intensity of control in geographic scale would vary based on the situations. So can you say a little bit more about that?

So does the variation on the geographic scale imply that it may not be necessary to do the response up to 150 meters around a specific case depending on the particular situation? Or...

Dr. Janet McAllister: So, yes. So it's actually goes the other way. And in our new CONUS plan we tried to clarify these Zika zones of transmission, where you have a yellow box or a red box around more widespread transmission, or multiple cases, or if you have these local cases that are geographically separated from each other.

And so that intensity in geographic scale, really, that comment is directed toward - if you happen to have multiple cases that are, that fit the definition of widespread transmission, then the area around that case automatically expands to a one-mile radius...

Richard Brooks: Right.

Dr. Janet McAllister...or even larger, based on where the cases are found. And so that geographic scale may actually be much larger. In which case, rather than going house to house in an entire one-mile area, which could literally be hundreds of houses or properties; that you might at that point opt to employ aerial spraying, for example, to cover that much larger geographic area that you would want to do mosquito control in.

Richard Brooks: I understand. Thanks for clarifying.

Coordinator: Our next question comes from (Whitney Qualls). Go ahead, your line is open.

Whitney Qualls: Sorry, took just a second to get off mute. Yes, I was curious. With the AMCA coming out with the training material - which is great - but I know that there have been many CDC-funded Centers of Excellence that also have been tasked with developing training material, guidelines. So how do you envision these tying together, so that we're not kind of reinventing the wheel, and maximizing our resources and ability to train vector control professionals?

Dr. Janet McAllister: Yes, I think I'll actually ask maybe Jeff to talk a little bit about the Centers of Excellence. But these, just as an overview, these Centers of Excellence are supposed to be a university mosquito control - health official partnership to address research needed for vector control, but to train specifically the graduate students and the next generation of vector control specialists, and not necessarily to train the rank and file workers in mosquito control programs directly. So Jeff, you could maybe expound on that?

Jeff Bortchert: Yes, sure. Thanks Janet. And I think you captured it well with just an overview. The training component of the COEs is essentially what Janet said. So it's looking at, you know, sort of academic programs to focus on graduate students or undergraduate students.

But there is also a component that does actually train, in some cases, the rank and file groups. And so, we're actually having a 2-day meeting here in May to talk through a number of these issues. To make sure that whatever trainings are developed, are standardized so that you know the same messaging, and then, I think more importantly, to deconflict any of those sort of lower-level trainings, so that, you know, we're not paying for people to do the same thing.

So this issue is actually something that we're talking about at length right now, looking at the AMC training because those have been the earliest ones to get completed, and then look at what the other COEs have proposed to do. So it is something that we haven't quite figured out the answer to, but we're definitely thinking through.

Jim Crockett: That work (Whitney) as - (Whitney) for your purposes?

(Whitney Qualls): Yes, thank you. I don't have any follow-up.

Coordinator: Our next question comes from (David Gaines). Go ahead, your line is open.

(David Gaines): Yes, hi, (David Gaines) from the Department of Health. Last year we when we applied for ELC funding, we put in a sum for - to support mosquito resistance testing at one of our state universities because they had the laboratory and facilities to do that testing.

However, that money didn't come in until August. And so that didn't leave much time for collecting mosquito eggs from different parts of the state and getting them to the university. And we just assumed, okay, well next year there'll be more ELC funding, and we'll be able to continue that program next year. But then the ELC supplemental funds were restricted to just pregnancy registry activities, and it looks like there's no new funding coming along the way.

So, the university might be able to test a number of eggs from different districts that were collected last fall, but I'm not sure if they'll be able to complete that resistance testing with the funding that we have, especially since it runs out in the end of this July and there would be mosquito control programs that were collecting eggs this summer to submit to that.

So I'm just wondering what we should - should we just kind of drop the mosquito resistance testing program at that point?

Jeff Borchert: Hi, this is Jeff)again, at Division of Vector-borne Diseases. You know, it's difficult for us to determine if there's going to be additional money for Zika and, you know, how it'll pan out in the ELC program.

And so I think, if there's a way - if you could maybe contact us directly and talk through that issue -if we could help you work through it, - but it's hard for us to answer. And you know, my involvement with the ELC is mainly just on this M two portion of it, which is the vector control. And so you know, at this point we don't have plans to add additional funding to that.

But that doesn't mean that additional funding may become available as we begin to sweep agency funds, you know, toward the end of the fiscal year and then try to spend them. So unfortunately, it's not something that I can give you a very specific answer on.

(David Gaines): Okay, thank you.

Coordinator: Our next question comes from (Daniel Schumas). Go ahead, your line is open.

(Daniel Schumas):Thank you. This is (Dan Schumas) at the Armed Forces Pest Management Board, closely associated with the Walter Reed Biosystematics Unit which is in DC with the Smithsonian Institution, and that group maintains the national mosquito collection.

So I'm wondering that on - with such extensive surveillance going on throughout the United States, I'm wondering if anything is being done with a representative sample of all these mosquitoes - for *aegypti* and *albopictus* - to have them further tested genetically, to determine if there are subspecies or strains throughout the US that might impact vector competence, insecticide resistance, and maybe other bionomics, or other parameters of the vectors.

That could be good for us to know about for our own future intelligence, for these species, and for Zika or other pathogens transmitted in the future.

Dr. Janet McAllister: This is Janet, and I was hoping John-Paul or Harry would jump in on that one. At this point we're not asking anybody to do any of those activities. We're really just trying to get a much better handle on where the species are located, and to be able to do some modeling, so that we can look at, you know - *Aedes aegypti* tends to be an urban mosquito. So what kinds of environmental conditions do you need to have to have the mosquito, or would be likely places where it might be introduced and expand its range into? But we're - CDC certainly, or any of the collections are - is, are not receiving mosquitoes.

We're relying on the locals to do all of the trapping and identifying and just reporting their results to us. But that may be something we could discuss as future work, or perhaps something with the Walter Reed folks, if funding becomes available to expand or do some of that sort of representative activities across the US that you just described.

John-Paul Mutebi: Yes, this is John-Paul here. Do you hear me?

((Group)): Yes.

Dr. Janet McAllister: I can hear you JP.

John-Paul Mutebi: Okay, sorry. I kind of struggled with the mute. But I like the idea that has just been introduced. And as Jane has just said, we didn't consider it in the program. And that is also because of the background in that *Aedes aegypti* is kind of widely spread, but there's no evidence of any speciation among the different populations.

There's a whole lot of evidence of genetic variations but not really speciation. And that goes for *Aedes albopictus* as well. So we didn't think about it at the very beginning. And the genetic variation may be associated with differences in vector competence as well. So, as Janet has just said, that is something we may have to discuss separately at some later stage.

(Daniel Schumas): Fair enough. Thank you.

Coordinator: I show no additional questions at this time. But as a reminder if you would like to ask a question press star followed by the number 1, unmute your phone and record your name clearly, so I may introduce your question. One moment please for incoming questions.

Jim Crockett: So Janet and (Holly). What we'll do is hang tight for at least another 2 minutes - so if there's anybody else with an additional question or get involved in the discussion - so we'll stand by.

Coordinator: I show no questions at this time. But again, as a reminder if you would like to ask a question press star 1.

Jim Crockett: So (Holly) can interrupt us if we have any questions. But Janet, we'll kind of start to close this session, if you don't mind.

((Crosstalk))

Dr. Janet McAllister: That's fine.

Jim Crockett: For those on the line, just please remember the transcripts, webinar slides, and the audio recordings. It is our full intent to keep these posted on the webs - the website. Here at CDC, where on a regular basis try and share the location with those as we update and post those. Taking a little longer than expected but we are still getting there to ensure they are getting posted.

And sure they are posted and that is the ultimate destination for these, so that will be a great resource or tool for those who were not available to attend in person. Other than that, again I'd just like to say thank you for participating and Janet, I'll give you a chance for any closing questions. Please share this information, as we move forward in time. Next slide for a minute though please.

For upcoming webinars are listed on this slide here. You see the one with Janet and her team today. Again, the next ones are Wednesday and Thursday upcoming to close out the series for this month. So that'll be available there at this point.

But again ,if you have additional questions, you want us to queue up for future webinars, or questions from past webinars (hopefully) you'd link in with us at preparedness@CDC gov. We'll be glad to ensure those gut - get to the right place. That's preparedness@CDC.gov. Janet. - First let me ask (Holly) - anybody else on the line for questions?

Coordinator: No questions at this time.

Jim Crockett) Thank you. Janet, any closing comments from you or your team?

Dr. Janet McAllister: I just want to thank everybody for participating and asking some really great questions.

Jim Crockett: Janet, thank you very much. And I guess you're back on the road in a while, so we'll see you, I'm sure, one of our states in the future locations. Think you'll head down to Louisiana next. So, have a good, safe trip, and we'll see you next week I think. So (Holly), we'll hold tight for you and everybody else. Thank you very much for your call and your time.

Coordinator: This concludes today's conference. Thank you for participating. You may disconnect at this time. Speakers, please stand by for the post-conference.

END