# Packing and Shipping Suspected Ebola Specimens

Hello there, everyone. Welcome, and thank you for joining. It is 1 o’clock, so we are going to go ahead and get started. We have a lot of content to get through today, and we’re excited to have you here, along with some very special presenters. My name is Chelsea, and I am a consultant with Guidehouse supporting CDC’s OneLab Initiative.

Just want to note a couple of things before we start the webinar today. If you’re having any technical difficulties throughout, you can feel free to email our OneLab inbox. It’s onelab@cdc.gov. That’s onelab@cdc.gov. You’ll see that was just popped into the chat too.

If you have questions throughout the presentation, we welcome you to enter them into our Q&A function. You’ll see it on the bottom ribbon of your screen. If you submit those, we’re going to try our best to get to as many Q&A as we can at the end of the webinar, but any lingering questions we’ll be sure to try and reach back out with answers. You can always email questions to our inbox as well.

Note that we’re going to post links to live captions in our chat right now. If you want to access these live captions throughout, they’ll be available through the whole session. Just be sure that if you’re going to use them that you have the Live Captions link pulled up and this Zoom webinar pulled up as well. You’ll need both.

All right. So let’s go through our agenda today. We’re going to start just by introducing our presenters. We’re going to talk through some relevant resources that OneLab Network has posted that are relevant to today’s topic. We’re going to have our main presentation with some great guest speakers. We’ll squeeze in that Q&A at the end and we’ll tell you about our next event we have coming up next week.

So let’s go ahead and introduce you to our amazing presenters today, starting with Dr. Villanueva. She’s been with CDC since 2007 working in the Influenza Division, and currently in the Division of Preparedness and Emerging Infections where she is the Laboratory Preparedness and Response Branch Chief overseeing the biological component of the Laboratory Response Network, or LRN. The LRN was established in 1999, and it’s an integrated domestic and international network of laboratories designed to respond quickly to biological, chemical, and radiological threats and other high-priority public health emergencies.

Dr. Villanueva has been engaged in several public health emergency responses at the CDC, including influenza A, H1N1; influenza A, H7N9; Zaire ebolavirus; Zika virus; COVID-19; mpox virus; and most recently, Sudan ebolavirus. She has taken a lead role at CDC, validating, verifying performance, obtaining regulatory clearance from the FDA, and distributing clinical diagnostic tests for infectious disease. Thank you so much for being here, Dr. Villanueva.

Next up, we have Dr. John Klena. He’s a PhD infectious diseases microbiologist whose professional career began in 1992. Dr. Klena has extensive experience in microbio– microbial genetics, microbial genomics, and pathogenicity studies.

Through his work and research, John has been fortunate to be able to work across the world, although the focus of much of his team’s of 10 work in Bangladesh, Bolivia, and Uganda. At CDC, Dr. Klena supervises this team of 10 and provides and performs diagnostic assays to national and international partners. The team has extensive experience in viral isolation, phylogenetic analysis of viral genomes, and the safe handling and manipulation of high-consequence viral pathogens. Thank you, Dr. Klena, for joining us today.

Now you probably recognize Dr. Alicia Branch. If you’ve been on any of these OneLab Network calls today, she’s our OneLab Network lead. She’s a health scientist safety specialist in the Division of Laboratory Systems. Dr. Branch has more than 20 years of professional experience as an academic researcher and has served in various roles in the clinical laboratory.

She supported three pandemics, including serving twice during the current pandemic as the External Biosafety SME and as the laboratory and of CDC’s Infection Prevention and Control team, performing wave point-of-care antigen testing in three nursing home facilities. Thanks, Dr. Branch. We’ll talk to you shortly.

Today we also have Dr. Trevor Shoemaker. He currently serves as the Team Lead for Epidemiology, Clinical Surveillance, and Health Education within the Viral Special Pathogens branch at the CDC. The team’s current activities focus on the detection, response, control, and clinical characterization of viral hemorrhagic fevers. In the last few years, the team has been directly and actively involved in multiple filovirus outbreaks in the Democratic Republic of Congo.

Prior to becoming team lead, he served six years in Uganda as Surveillance, Diagnostics, Research, and Outbreak Response Program Lead. Thank you, Dr. Shoemaker.

We’ll also have Dr. Brian Harcourt joining us today. He is an Ebola subject matter expert and a biosafety officer in the Viral Special Pathogens branch.

So before we give it over to our experts for the presentation, I’ll turn it back over to Dr. Branch. She’s going to open us up with some new resources and some resources that are really relevant for today’s presentation. Dr. Branch?

Thanks, Chelsea. Before we get started with today’s presentation, let me give you some of the new resources. First, we have the Department of Transportation or DOT and the International Air Transport Association, IATA, job aid, as you can see. And it’s really for shipping by motor vehicle, carrier, ground, or air transport. And this is for hazardous materials regulations.

We also have a safely packing, shipping, labeling, marking Category A and B job aids. In addition, there is a packing and shipping dangerous goods course. This course actually provides a general knowledge for training, packing, and shipping Division 6.2 infectious substances and dry ice. It is intended for public health and clinical laboratories that are involved in any step of the packing and shipping transport process of patient samples or cultures.

In addition to this, there is a specimen shipping and guidance presentation and audio and recording we would like to highlight, the introduction of the Laboratory Risk Management course and the Ebola-specific job aid. And it’s for collecting, transporting, and submitting specimens for Ebola virus testing in the US.

Finally, I would like to highlight– we’ve been talking about this for a few months, and I would like to say that it’s finally available. It’s the Emergency Preparedness Response Guide, which covers resources for laboratories to reference for biological, chemical, and radiological emergencies. It also can be yearly usually used for training new professionals hired to support emergency responses. And now I would actually like to turn it over to Dr. Villanueva for her presentation.

Hi, everyone. I guess I’m reviewing the objectives for today. So by the end of the webinar, our learners will be able to describe background details of Ebola virus disease outbreak in Uganda caused by the Sudan virus or Sudan ebolavirus and then also to discuss testing, packaging, and shipping considerations for submission of those specimens to the CDC or other reference laboratories. Can I have the next slide?

This is our webinar outline. So I think we’re going to go to John Klena for the first part on the background if I’m not mistaken. Thanks.

Hi, Julie. This is actually Trevor Shoemaker. I’m going to just give a quick background on the current epidemiology of this outbreak that we’re discussing today related to laboratory packaging and shipping.

But just to put it in a bit of context, this current Sudan virus outbreak in Uganda caused by Sudan ebolavirus was first declared by the Ugandan Ministry of Health on September 20 of this year in Mubende District, which is in the central region of Uganda about 150 kilometers east– or excuse me, west of the capital city of Kampala. It’s not far from where we had the last Sudan virus outbreak in Uganda, which was in 2012, which was about 70 to 90 kilometers west of this location. So it is an area where we’ve had previous Ebola outbreaks in the past.

The first confirmed case of this outbreak was in a 25-year-old male who lived in Mubende District and presented to the regional referral hospital there. They were quickly identified as a suspect by hemorrhagic fever due to ongoing viral hemorrhagic fever surveillance program, as well as training at that hospital to identify and report viral hemorrhagic fevers to the National Laboratory and the Ministry of Health.

So a sample was quickly sent to the Uganda Virus Research Institute, which serves as the National Reference Laboratory for viral hemorrhagic fevers and was confirmed by RT-PCR on September 19. Next slide, please.

So Sudan ebolavirus is in the family file Filoviridae, order Mononegavirales in the genus Ebolaviruses. But unlike Ebola Zaire, which is the Ebola virus that most likely all of us have heard more about in the last few years, it’s the one that’s been causing multiple outbreaks in DRC, or Democratic Republic of Congo, and Guinea. Also was the cause of the 2014-’16 West Africa outbreak.

And there was a vaccine developed against this virus that’s currently licensed here in the United States. But there is no licensed vaccine available for Sudan virus.

And Sudan virus is spread, just like any other Ebola virus or filovirus by human-to-human transmission by direct contact. It is not spread through airborne transmission. And the incubation period can range from two to 21 days, but typically is anywhere between seven and 10 days on average. And infected persons are not considered contagious until they become symptomatic. Next slide, please.

So just a current outbreak update in terms of the number of cases and some other information. As of yesterday, there are a total of 115 cases of the Sudan virus in Uganda, 95 of which have been confirmed and 20 are probable. The total number of deaths is a total 52, 32 of those being confirmed case deaths and 20 probable deaths with a case fatality proportion of 45.2%.

The total recoveries or people that have had Sudan virus infection and have recovered from that and been discharged is now at 34. And the number of affected districts stand at seven. You can read them there.

But of note more recently, the capital city of Kampala and also just a surrounding district of Wakiso have started to have cases as well as transmission of cases, infection from contacts of those initial three cases that were identified a week or so ago, a couple weeks ago. But the majority of the outbreak is still centered in the Mubende and Kasambya areas, the site of the original point of infection in the outbreak.

The total number of infections in health care workers is at 15 with four of those being deaths. And the contact tracing has been relatively– it’s been a relatively high percentage of contacts followed, ranging usually around the mid 90s. This particular update is showing 99% followed in the last 24 hours with 18– 144 active contacts. But this has ranged anywhere from about 85% up to 95% on average.

Next slide. And with this, I’m going to pass it to my colleague John Klena to give the current Uganda laboratory update. Over for me.

Thanks, Trevor. So hi, everyone. This is John Klena. I’m here currently in Uganda. There are two laboratories right now that are doing testing for the Sudan ebolavirus in Uganda.

There is the Uganda Virus Research Institute, which CDC has supported for a number of years now, and then the Central Public Health Laboratory through the National Laboratory using equipment from the East African community that was really instrumental for their response to COVID. That laboratory is set up in the Mubende District right next to the Mubende regional referral hospital and is doing testing onsite.

I currently have only a little bit of visibility on the testing that’s being done at the Mubende site, so the numbers I’m going to give you is about half of what we’re seeing in total for testing, and is really only the Uganda Virus Research Institute numbers. So since the September– the 19th when the first case was diagnosed at UVRI, UVRI has received about 867 samples up until October 7.

Those samples were coming in from Mubende. After October 7, those samples were really coming in from other parts of the country. And in the last 10 days or more or so, a little bit more than that probably, it’s been a very heavy load coming in from the capital city, Kampala.

Out of those 867, about 84 samples have tested positive for the Sudan ebolavirus. And those 84 represent 66 unique cases. So the other 18 are repeat tests for already known cases of Sudan ebolavirus.

The Mubende laboratory based on an update today has tested over 600 samples since they were operational about October 1. And at UVRI, in addition to testing for the Sudan ebolavirus, the UVRI staff is also testing for other viral hemorrhagic fever causes, including Ebola Zaire, Ebola Bundibugyo, Crimean-Congo hemorrhagic fever, and Rift Valley fever.

Also along with that load, they’re doing testing for Sudan– they’re doing whole genome sequencing for Sudan. And up to now, 17 complete genomes have been generated for the Sudan strains that have come out of this outbreak. In addition, five samples have tested positive for Crimean-Congo hemorrhagic fever. It is averaging about one per week since the beginning of the outbreak. Two of these were fatal.

And just to point out that two of these cases, not the two that were fatal– only one of these was fatal– they were found in samples that were also circulating in Mubende. And so in addition to having Sudan virus in Mumende, there was also this Crimean-Congo hemorrhagic fever outbreak circulating at the same time. I think that’s the end for me, and I think we’re back over to Julie for the next slides.

Thanks, John. Really appreciate everybody joining today, especially John from Uganda. So I want to talk about where we are right now with the US risk of Sudan virus spread. So WHO has assessed the risk for spreading as low. Uganda, clearly this is their fifth outbreak, and they did have an outbreak of Zaire in 2019. They have experience, unfortunately, responding to Ebola virus disease.

There is exit screening that’s occurring in Uganda of people that are getting on planes. And right now, the risk of importation into the United States is currently assessed as low. There are low number of travelers every day to the United States that come from Uganda. there are no direct flights to the United States.

And in the United States, there is entry screening of those US-bound travelers from Uganda in the five airports where they are arriving. Can I have the next slide, please?

Now we’re going to talk a little bit about some of the domestic preparedness activities. Next slide. So as you may know, CDC has activated the emergency response structure within the center to be able to respond to this outbreak. We are standing up several multidisciplinary CDC Ebola Response Teams, or CERT teams. These teams will be ready to go in case there is an imported case in the United States to be able to help support our jurisdictions with a response.

We’re updating our guidance on patient management with suspected Sudan virus. There are a whole lot of websites that were pasted in the chat, and I strongly encourage you to look at these not just once, but often, as they will be continually updated as this outbreak progresses. And we’re also outlining a process to access experimental Sudan virus therapeutics. Next slide.

In terms of testing, we are working with the regional emerging special pathogen treatment centers. There are 10 of them in 10 HHS regions across the US, as well as 28 LRN laboratories to be able to conduct testing for Sudan virus.

We’re also preparing– the treatment centers are preparing specialized high-level isolation units. They are equipped with infrastructure, laboratory testing capabilities, and staff to be able to care for patients with highly hazardous communicable diseases. Next slide, please.

So the test that’s being used is called the BioFire FilmArray NGDS Warrior panel. And it is cleared by the FDA as an IVD. And it detects multiple Ebola viruses that are listed in the slide. This is an assay that was developed by the Department of Defense and is in use right now for US biodefense– or US Department of Defense laboratories and laboratories designated by the Department of Defense. Next slide.

The result that will happen from the BioFire NGDS Warrior panel will be a presumptive test result. And that will happen right now at 22 LRN laboratories throughout the US and four of the regional emerging special pathogens treatment centers.

So that means we are standing up 28 labs as well as the 10 regional treatment centers. But now we have 22 and four that are able to do the testing right now under CLIA. And again, this would be a presumptive positive. And any presumptive positive test result must be confirmed at CDC. Next slide.

Some things to consider with diagnostic testing. So a negative real-time PCR test result from a blood specimen collected from a symptomatic patient, less than 72 hours after symptom onset does not rule out infection. So there will be guidance if that happens on what the next step should be. If it’s more than 72 hours after symptom onset, then that test result will rule out Ebola virus disease. Next slide.

So things to think about for laboratory testing. This testing requires whole blood EDTA. And the volume for adults is at least four milliliters, and for a child at least one milliliter. The specimen are to be collected in plastic tubes with EDTA, as shown in the slide.

And if you’re going to be shipping this specimen– and we’ll talk a little bit more detail about packaging in a minute– but the shipping conditions to a designated LRN laboratory would be on cold packs. And if you send to CDC, it would be shipped on dry ice. Next slide, please. OK. That’s all for me. Thanks.

So now we’ll talk about some general guidance for laboratories handling specimens suspected of Ebola. The next couple of slides, we’ll actually discuss a message that went out on October the 19th.

Although the risk of a travel-associated Ebola case in the US is low, CDC still recommends that clinical laboratories actually start reviewing information on specimen collection and transport of infectious substances safely suspected of containing Ebola virus. Most of the Ebola cases will likely have other diseases, especially if the patient has no high-risk exposures. Laboratories will still need to be able to perform a non-Ebola test while waiting to rule out actual positive Ebola specimens.

CDC recommends that the Ebola testing should only be ordered and performed if patients who meet the actual criteria for patients under investigation for an Ebola virus. This means that before collecting specimens, any Ebola testing clinical laboratories must contact the State Department, and the State Department will actually contact CDC. Next slide, please.

I think I kind of spoke a little about this. I will mention the third bullet. Part of the reason why we want laboratories to continue doing other testing is that there may be some cases where there’s some similarities or symptoms that are related to malaria, especially if the patient or a participant has actually traveled in a malaria-high area. Next slide, please.

If testing is needed, CDC will actually provide guidance, as Julie spoke about, for how to actually collect the specimen, and also shipping instructions based on if they’re going to ship the specimen to a public health laboratory or to ship to CDC. Next slide, please.

If testing is needed, they should follow it when it comes to packing and shipping– should follow the CFR 173.96 Category A infectious substance packing and shipping requirements. These specimens are not considered select agents because they haven’t actually been identified to contain the actual Ebola virus disease. So that means with them not being a select agent, the request to transfer a select agent and toxins does not apply. Next slide, please.

As always, we always want laboratories to perform a risk assessment. This is actually something that could be done now, or if you did complete a risk assessment years ago you can actually go back and revisit that risk assessment for Ebola virus.

So some of the things that you really want to consider when you’re doing a risk assessment is, what are the procedures that are going to be involved in that particular laboratory? What are your hazards? The path of the sample. I think sometimes we forget– laboratories forget to include, how is the sample going to travel throughout your laboratory?

And if a sample has to be– a confirmatory sample has to be submitted to a public health laboratory or CDC, how are you transporting that sample? Or if you have a patient on a floor, you want to take in consideration about using a pneumatic tube system. It is definitely not recommended to use a pneumatic tube system to transport samples that have the potential to be Ebola virus. So you would want to consider how your clinical staff is going to transport that sample throughout the building and back into the laboratory.

You want to also think about the training of your personnel, the competency level. As well as because they will be shipping an actual Category A, they need to be certified. So these are opportunities for you to actually look into making sure that the training is– the staff is trained and they’re competent in what they’re doing, as well as in the packing and shipping process. And along with that, they need to be actual certified.

You want to look at the laboratory equipment and the facility, as well as any other additional resources you need. If you need to look at– think about your emergency response, your skill kits if they need to be checked, those are things that you want to keep in mind. We want to actually be ahead of things instead of responding to something after it’s happened. Also, you want to follow the OSHA bloodborne pathogens standards as well. Next slide, please.

When it comes to decontamination, you want to perform routine cleaning of areas that are touched on a regular basis. You want to use an EPA register List L disinfectant to clean those areas.

One of the things you want to take in account when you start talking about cleaning, you want to be careful about cleaning a particular instrument that may not be able to withstand one of the disinfectants. So you want to make sure that you have actually read your instruction manual, reached out to the actual manufacturer for that particular instrument if you have any questions.

You want to also disinfect the areas where you’re handling the specimen, where you’re packing the specimens and packaging the specimen. In the event of a specimen– specimen gets spilled during the packing shipping process, you also want to be prepared to actually have a special kit set up for that particular area if you’re a pack– you have a designated area for packing and shipping. Next slide, please.

I don’t like to use the word easy to disinfect the Ebola virus, but I’ll say if you are doing it properly and effectively, it can be easily decontaminated. So with that being said, we want to spray the surface contact for at least three minutes using one of the disinfectants on the EPA register L List.

And as always, you want to follow the manufacturer’s instructions for concentration to confirm contact time, the care, and the handling of that actual disinfectant. As well as, again, I’ll stress again is those instruments, because not all of the instruments you can directly spray them. Next slide, please.

Waste management. We wanted to take into account that the materials that are contaminated or suspected of being contaminated with Ebola are regulated as Category A infectious substances under the DOT HMR CFR parts 171 through 181. And I recommend that you actually do go out and visit the actual regulations to make sure that you, your staff, and everyone understands exactly what the regulation says and if they are prepared.

You also want to speak with the actual contract company that removes your waste from your actual site. Additionally, you can look at some procedural guidelines on properly packaging Ebola waste seen in managing solid waste contaminated with Category A infectious substance from the DOT. Next slide, please.

And I’ll stress again, always disposal must comply with your local regulations– regional, state, national, and international regulations. So you should also visit the state universal waste program from EPA, as well as actually going to your state– your states actually have sites. Public health sites have information that you actually can pull based on what the regulations may be for your particular region or state.

I actually said that you should speak with your waste contract management contractor. Next slide, please. And now I’ll turn it over to– I’m not sure. I think Brian is going to do packing and shipping.

Sorry about that. I was looking over some of the questions floating by. OK. Well, hello, everybody. [LAUGHS] I didn’t send in my bio, but I’m Brian Harcourt, Viral Special Pathogens, Biosafety Officer and Select Principal Investigator. I’ve been around CDC in some capacity since 1994 with about 20 years in virology and nine-ish in bacteriology, bacterial meningitis.

And I’ve been in Viral Special Pathogens, again, since 2000– late 2015 as their safety officer. So with that little catch-up, can we have the next slide, please? OK. Minimize something so I can see the whole screen.

As we’ve kind of already reviewed, the specimens from PUIs or confirmed EVD cases with a star on that should be packed and shipped as Category A infectious substances in accordance with the link shown there. The only caveat here is if you have a confirmed– by isolation is our current definition, Ebola virus case– then that specimen would be a select agent.

So coming in offsite or LRN lab, it would most likely just be Category A nonselect agent. But at the time– by the time the person is confirmed as an EVD case by virus isolation, they will already be in a specialized hospital, so just keep that in mind.

All persons packing and shipping infectious substances must be trained and certified in compliance with DOD or the IATA requirements every two years. I think somebody had asked, where can they get that training? I am not sure, but I’m guessing somebody on this call– or we have experts that can tell you where you get that training.

Specimens for shipment should be packed following the triple packaging system consisting of a primary container. That’s a sealable specimen container wrapped with absorbent material. A secondary container that’s watertight and leakproof, and an outer shipping package. Slide, please.

So packaging considerations. You must use a UN-approved packaging that has to be noted with UN specification that marks that it has certified the required drop test. Quantity limits and additional markings are based on the mode of transportation, whether that be passenger or cargo. And no replacements or substitutions of packaging materials are allowed. Next.

So this is key here. So packing cold specimens. So basically, if you’re packing a specimen that’s going to be tested by BioFire in an LRN lab, BioFire requires that the specimen arrive between two and eight degrees. BioFire cannot be used to test frozen specimens.

So ensure that suspected EVD specimens are packed and maintain temperatures of two to eight. Within the secondary container, place sufficient ice packs to surround the sealed secondary packaging and also to provide further insulation.

It is important to note that surrounding the secondary packaging on all sides with ice packs has been shown to improve the length of time the specimen remains frozen– or cold, not frozen– cold during transit. Next, please.

All right. Now we’ll talk about frozen. So if you’re shipping specimens to CDC for testing on our assay, we require that it arrive frozen. Apologies for the two different temperatures. That’s the way these two assays are going.

So you’re going to ensure suspected EVD specimens are packed to maintain temperatures of less than minus 20. So within the secondary container, place sufficient dry ice to surround the sealed secondary packaging. And it is important to note, similar to the ice packs, that surrounding the entire container with dry ice improves the length of time the specimen remains frozen during transit.

And during these times of logistical difficulty, sometimes the transit time becomes longer than anticipated. So it’s really important to get that either dry ice for frozen or ice packs for cold really packed in there. Next slide, please.

So carrier considerations. So FedEx accepts Category A packages. They will not– just for the record– will not ship select agents. But remember, these are Category A nonselect agents at this point.

You cannot use the FedEx clinical pack or clinical box, and you must follow the IATA dangerous good regulations PI 620 packing instructions. UPS accepts Category A packages. And again, you must follow the IATA dangerous goods regulations and those packing instructions.

Additional private carriers may accept Category A packages, and you can check with your local carriers for more info. Additionally, sometimes those private carriers can get a lot more expensive than FedEx or UPS. Just a word of warning.

And do note that the US Postal Service does not accept Category A packages. Next. And here’s your list of sources. So I turn it over to–who’s taking this home? Oh, Q&A. We’re all taking it home. OK.

Let’s see. I will– let’s see. There’s a question in here saying, where should you go to get Category A certification for staff? I will actually answer that.

CDC does offer a packing and shipping course, but however, that course really only covers the general knowledge portion of it. There are some additional requirements. If you actually go to the iata.org and the DOT links, it’ll actually tell you the additional trainings.

But the certification ultimately is your facility. Whatever your facility’s curriculum that they actually designed for you, they will actually then provide the certification and certify that the person actually knows how to do it.

One of the new additions that has been added to IATA is that you actually have to perform a com– as well as DOT is that they have to perform a competency exam. And that means that they really– the employer actually has to see the person actually package and ship the samples. Let’s see if there’s another one on here.

One of the questions, it says why [INAUDIBLE] the guidance images show no packaging for a biohazard bag. Specimens typically are kept in a biohazard bag. I’m not sure which image you’re speaking of. Is that the one from the actual packing and shipping portion, or something that’s throughout the slides?

Because we actually do provide the sample into a biohazard bag. Or if you look at the other packing and shipping diagram, the actual– it’s going in the actual tube that actually has a packing and– has a biohazard label on it. One of the questions is, will the slides be available? Yes, they will. It takes about two weeks for everything to be uploaded.

There’s a question. I’m not sure which one from the team would like to answer this. It says, why are there different volumes for adult and pediatric testing? What age is considered a child?

I’m happy to take a stab at that to start with. It’s not so much that there’s going to be a difference in the testing between an adult and a child. It’s just more difficult to draw a large amount of blood from a child that is suspected of an Ebola case. And so that accounts for primarily why there’s a difference in sample volumes and what’s collected between the adult and the child.

Here’s another one for the team. How is CDC selecting the members of the CERT teams?

Hi. This is Trevor Shoemaker. Maybe I can try and start that. I believe these are the teams that CDC would put together to come out to a state if there was a positive Ebola case and assistance was requested. Those CERT teams are just being rostered here with subject matter experts in the respective areas that may need assistance in states, including epidemiology.

We’d have a senior team lead to interact with the state health department and local health departments and coordination. We’d have a laboratory specialist, a biosafety specialist, an infection control prevention specialist, or any other data management, anything else that might be in need of assistance just based on previous outbreaks and imported Ebola cases in previous years. That answered the question. Over.

Well, let’s see. [MUTTERING] There’s a question. Where can I find Category A shipping boxes? You can actually purchase them from any of the vendors. I’m not going to say any particular names. So where you get your regular supplies, you can actually contact the actual vendor and see if they actually sell a Category A box.

Let’s see. I thought UPS– I thought UPS allows– only allows 2.5 grams max of dry ice. Is this true? Anyone from the team want to take it? If not, I’ll–

I think it’s a good question that’s probably worth following up. I was not aware of that myself, but I think it’s worth following up on that to respond back to you. Over.

 Yeah, that is true. There actually has been a few changes I want to say early ’22 or the end of ’21 where there are some changes to the dry ice. So if we can get that question and actually follow up with the person who submitted the question.

This one is– can’t really– trying to read. See what this– it says, are samples from patients suspected of Ebola that are unconfirmed shipped as a category A or would they be shipped as Category B?

That would be Category A.

Yeah, maybe to follow up on that, so Ebola is an exception to what we think about as shipping dangerous substances and dangerous goods. So any suspect Ebola sample– so if you have a sample that’s just suspected, it hasn’t been tested by PCR, but you suspect that it might be an Ebola case, it has to be sent as Category A.

So that’s the distinction for a suspect Ebola case. And it’s a little bit unusual, and it falls out of the norm. But you can just remember that because it is an exception to that rule.

And I’ll add that it’s because Ebola falls on the list for both DOT and for IATA. Anything that kind of falls on those lists as a Category A, you have to ship them as Category A. Let’s see [INAUDIBLE]. What test req or form needs to accompany the specimens when sent to the LRN lab? Anyone want–

Can you repeat that question, please? I’m sorry.

The question is, what test requisition or form is needed to accompany the specimen when you send it to the LRN lab?

Yeah, this is Julie. Great question. We had a similar question earlier that I replied to, but I would strongly recommend that you reach out to your state or local LRN laboratory to get guidance on this because every laboratory does things slightly differently. So this is a great time to do that outreach to your LRN labs to better understand what to do in that situation. Thanks.

Thank you.

Can I chime in on one of the questions here?

Sure.

Because there’s been a couple of them, and I’ve had questions emailed to me recently and from Uganda. Does the CDC have any recommendation on instruments that should be used for testing on patients who are PUIs? We have concerns with using the instrumentation in the main lab as many vendors do not have contamination procedures.

There is a link– I’m trying to dig it out. I’m not so good at multitasking, so trying to read and answer and research at the same time isn’t going well. But Julie is the queen, finding these links, so she might have it before I even answer it.

So I think for the clinical chemistries, talking to folks in hospitals and whatnot, there are three different really kind of styles. Maybe there’s more. Basically, you can talk to your manufacturer and find out how to. A lot of them, it’s just a matter of bleaching one or two different outside parts or another disinfectant such as 5% MICRO-CHEM, 3% Lysol, or whatever you use in house. It also works on Ebola. If it works on a non-Ebola virus, it’s going to work just fine for disinfecting Ebola in general.

For your more sophisticated machines, if it’s a closed– it has a closed tubing system, many times you can run bleach through it. I talked to a couple of companies that actually have weekly recommended decons that you would have to do. This is part and parcel of running the machine. And using that material would actually decontaminate the machine.

Otherwise, things that might be on the outside like there’s a needle or aspirator that punctures the tube to bring the sample, bleach that. You run bleach through the system.

But the key here is to contact the manufacturer. So many vendors do not have contamination procedures. The ones I have talked to do. Sometimes it’s difficult to get a response from them, but in my experiences if you mention the word Ebola, you do get a much quicker response. So pro tip, I guess, maybe for you to mention that, and you can get the companies to respond more quickly.

Just kind of rambling, but there are ways around it. And it’s really important, I think, to find those ways now because I know a lot of testing doesn’t get done– a lot of chemistries don’t get run because people are afraid of Ebola. And have a healthy respect for it, of course, but there are ways of decontaminating machinery. You just have to do a little bit of research. Over.

I’ll ask one last question. If we have a presumptive positive on BioFire and still need to send a sample, do we still need– I guess [INAUDIBLE] say, and still need to send it? Or do you– is the question, you still want to send a sample to CDC? That will be a select agent or Category A. How best to ship?

This is Brian again. If it’s a positive on a BioFire, it has to be confirmed at CDC. It would not be a select agent. But yes, we would want to have that confirmed, sent to CDC and confirmed. You can call the EOC number and then have a consultation with viral special pathogens about how to ship that and what needs to be done. John or Trevor or Julie?

Yeah, this is Trevor. Maybe one step before you have a positive BioFire is that if– and this is focused on laboratory.

But if you have a suspect patient or returning traveler who’s ill that was in Uganda and the state epis, clinicians at the hospital have evaluated and discussed and maybe have a higher level of suspicion that this could be a potential Ebola case or a high suspected Ebola case, consultation with CDC, as Brian mentioned, calling the EOC will be patched through to one of us on our team or another clinician here to go through, whether or not it needs to– if that suspect case rises to the level that we need to test them, that’s usually a consultation most states would like to have with CDC prior to doing the test in the first place because once you run that test, if it’s positive a lot of things can happen.

And then– so if we do go to that next step of running that test or saying, yes, this person meets the criteria. We should rule out Ebola virus, run the BioFire if that’s the closest laboratory that can do the testing. Otherwise, we might be able to take the sample here. Then as Brian said, if it’s presumptive positive by that test, then we can coordinate the shipping with our laboratory. Over.

Thank you all. If you have questions that we didn’t answer, you can– please do feel free to actually send them in, and we will actually try to get around to answering your question. Again, I would like to thank our guest panelist for presenting today.

I would like to also talk to you about an additional training that will– webinar that will occur. And it will be next Thursday, November the 3rd, from 12:00 to 1:00. And I would like to share not just the title of this one, because it’s also about Ebola, but these are actual clinicians who have had the experience of having one of the Ebola patients in their actual hospital.

So it will be a great opportunity for you to listen to them, for them to share with you about the lessons they’ve learned from receiving samples from patients suspected of and infected with Ebola. And also, what their plans are for their actual clinics. You can see the link, and I think it’s been added into the actual chat for you to go and register for this highly recommended webinar.

As reminded, it was one of the questions that was asked earlier about, will the slides be available? And I will say, yes, they will. Give us about two weeks. As well as the audio will be also available, and this can be found posted on the cdc.gov, the OneLab link. And I think it has been also added in the chat.

And again, I’ll say thank you for joining us today, and have a great rest of your day. And I will see you all back next Thursday, November the 3rd.