Good afternoon. I'm Nikki Grimsley and I'm representing the Clinician Outreach and Communication Activity, COCA, with the Office of Emergency Risk Communication at the Centers for Disease Control and Prevention. I'd like to welcome you to today's COCA Call, What Clinicians Need to Know About Ebola Bundibugyo Virus.

All participants joining us today are in listen-only mode.

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After the presentations, there will be a Q & A session. You may submit your questions at any time during today's presentation via the Microsoft Teams platform. Please note that the ability to ask a question during the live webinar is limited to the first 1,000 attendees who join the webinar. If you are unable to ask a question during the webinar, you may submit your question after the live session by emailing coca@cdc.gov. Kindly note that we receive many more questions than we are able to answer during our webinars.

If you are a patient, please refer your question to your health care provider. If you are a member of the media and have a question, please contact CDC Media Relations at www.cdc.gov/media. Click Contact Media Relations at the bottom of the page and then complete the Request for Comment form.

I would now like to welcome our presenters for today's COCA Call. We are very pleased to have with us Dr. Peggy Honein, who is the Deputy Incident Manager for CDC's 2026 Ebola Response. Dr. Mary Choi, who is a Medical Officer in the Division of High-consequence Pathogens and Pathology in CDC's National Center for Emerging and Zoonotic Infectious Diseases. Dr. Christopher Hsu, who is the Deputy Lead of the Domestic Readiness Task Force for CDC's 2026 Ebola Response. Dr. Melissa Schaefer, who is a medical officer with the Domestic Health Care Infection Prevention and Control Team for CDC's 2026 Ebola Response. And Dr. Amy Schuh, who is the Diagnostics Lead in the Division of High-consequence Pathogens and Pathology in CDC's National Center for Emerging and Zoonotic Infectious Diseases.

It is my pleasure to now turn it over to Dr. Honein. Please go ahead.

Thank you very much for joining the call today. We really appreciate your interest and hope we will be able to answer many of your questions. I'm going to start out by just giving you a

little bit of the basics about what we know about the outbreak so far. Can we go to the next slide, please? Next slide.

And so here's a map, and we're going to go on to the next slide, and I will show you in a little bit more detail here where we are seeing the outbreak initially. So next slide, please.

As of yesterday's data, sorry about, we'll correct that to May 27, there have been a total of 1,077 suspect cases primarily in the Democratic Republic of Congo in the northeastern provinces there. So this started in the Ituri province, the best we know, that's where the first reports of cases are. And we're now seeing it also in North Kivu and South Kivu. So 1,077 suspect cases and 121 confirmed cases in DR Congo, 246 suspect deaths and 17 confirmed deaths there. In Uganda, in the capital of Kampala, there have been 7 confirmed cases and 1 confirmed death affecting a couple of healthcare facilities there, or the cases diagnosed in a couple of different healthcare facilities there.

This is a really rapidly evolving situation, and we are learning more every day. These are areas of the country where it's difficult to get full information in DR Congo. So we are continuing to gather information, learn more, and sharing it as rapidly as we can. I think what is important to note for clinicians in the U.S. is no Ebola cases associated with this outbreak have been reported in the United States, and the risk to the U. S. general public is low. Next slide, please.

So just to go over the background a little bit and what's happened very recently, we don't know for sure exactly when this outbreak started, but in early May, a hospital in northeast Democratic Republic of Congo, in that Ituri province, identified a cluster of severe illnesses that were affecting people, including healthcare workers. It brought up suspicion of Ebola disease symptoms, but the initial testing was negative on the testing with their field testing, which was very specific for the Zaire species of Ebola. Later testing with tests that were able to test for a broader range found that 8 of those 13 samples were positive and 5 were inconclusive. The further characterization of the virus found it to be the Bundibugyo virus, which is one that we have less experience with than some of the other Ebola viruses, but there have been two previous outbreaks of this species of the virus, one in Uganda in 2007, and one in the Democratic Republic of Congo in 2012. And the death rates in those prior outbreaks were 25% and 50% respectively.

We have very limited information so far on the cases in the Democratic Republic of Congo, but most cases to date have been in people 20 to 39 years old, and the majority have been in female patients. One American patient that was in the Ituri province in DR Congo, tested positive for Ebola, and that patient and six high-risk contacts that were Americans were moved; the one patient for treatment in Germany and the contacts for isolation in Germany

and the Czech Republic, and all are in stable condition. This is the 17th outbreak of Ebola that has happened in the Democratic Republic of Congo since 1976, and the most recent one just ended late last year. Next slide, please.

So CDC's work includes a range of things from the domestic preparedness and readiness to the global response to really integrating an effective public health response. So it includes detecting, monitoring, and containing the outbreak through the evidence-based approaches that we know will work. It means supporting the CDC country offices and working closely with the ministries of health in both Uganda and DR Congo as they work to respond to the outbreak, offering our technical expertise for surveillance, for infection prevention and control, laboratory testing, data management, other areas where it's requested, including case investigation, contact tracing, risk communication, and coordination of border health activities to minimize the spread of disease across borders. CDC is deploying staff to provide really strategic and technical response support to our country offices and the Democratic Republic of Congo and in Uganda.

We're also assessing other at-risk countries' readiness and preparedness and helping them make sure they were ready if there was to be any further spread. So this is just a preparedness activity that we do whenever there's an outbreak to make sure any surrounding countries are getting the technical assistance they need early on. Next slide, please.

But thinking of all of you as healthcare providers in the U. S., domestic preparedness is a big part of this. And we are supporting that through communication with state and local health departments, with all of you as clinicians, with laboratories, including our public health laboratories, but also clinical laboratories across the country, healthcare facilities and with the American public.

We have implemented enhanced travel screening and entry restrictions to help minimize the risk of Ebola coming into the U.S. So travelers that have been in South Sudan, Uganda, or the Democratic Republic of Congo in the past 21 days are being redirected to one of right now three different airports, and we expect a fourth airport to be brought online tomorrow, but right now being redirected to Dulles Airport in Virginia, to Atlanta, Georgia, or to Houston Airport in Texas, and tomorrow, JFK Airport in New York will come online. So hopefully travelers can arrive where they're going with minimal disruption, but by redirecting them to a smaller subset of airports, we can concentrate our port health staff to do entry screening and identify any high-risk exposures or anyone that's symptomatic upon entry.

We're also releasing health alert notices to get information out to you quickly as we know more, travel health notices so we have a level 3 travel notice for the Democratic Republic of Congo and a level 2 travel health notice for Uganda, and just current situational update and information. And we will continue to do that as we move forward. And with that, I'm going to thank you very much, look forward to the questions, and I'm going to pass you off to Dr. Mary Choi, who is one of our experts on this virus. So Dr. Choi.

Thank you, Dr. Honein. Next slide, please.

To start, I'm going to review some terminology that we'll be using during this presentation. So Ebola disease is the umbrella term that we use to describe clinical illness due to infection with any of the four viruses within the genus that cause disease in humans.

And these four viruses are Ebola virus, Sudan virus, Bundibugyo virus, and Tai Forest virus. It is important to note that illness caused by infection with these viruses are clinically indistinguishable. Bundibugyo virus disease is the term we use to describe clinical disease due to infection with the Bundibugyo virus. Next slide.

Now, I want to provide some context for the information that I'll be providing in the following slides. Most of the available data on infection with orthoebolaviruses comes from people infected with Ebola virus species Orthoebolavirus zairense. We believe that this data are applicable to all orthoebolaviruses known to cause disease in humans.

So Ebola virus is a serious, highly transmissible and often fatal disease. And as we'll review in the following slides, in the event of fatal cases, the time from infection to death can be as short as seven days. Without treatment, Ebola disease has a high mortality rate. The mortality rate varies by virus. For Ebola virus, mortality rates can be as high as 80 to 90% without treatment. Based on the two outbreaks of Bundibugyo virus, the mortality rate is between 25 to 50%. And based on what we know about related viruses, we believe that bats are the likely reservoir. Next slide.

In acutely infected persons, the virus can be found in all body fluids, including the ones listed here. In semen, breast milk, and breast milk, the virus can persist even after the person recovers after the acute illness. The virus is transmitted through contact with the bodily fluids of a person that is sick or has died of Ebola. The virus can also be transmitted through contact with objects contaminated by the bodily fluids of a person who is sick or died of Ebola. And in instances of virus persistence in semen, the virus can be transmitted through sexual activity with a man who has recovered from Ebola disease.

Finally, it is important to keep in mind that Ebola is not spread through air, water, and insects such as mosquitoes. Next slide.

The most common signs and symptoms of Ebola disease are listed here. As you can see, these signs and symptoms are non-specific and can occur in many other infectious diseases. A couple of things to note on the signs and symptoms.

First, there is no sign or symptom that is pathognomonic for Ebola disease. Second, fever is not universally present in all Ebola disease patients. Instead, it can wax and wane throughout the day. And it has been detected in about 70 to 80% of confirmed Ebola disease patients at the time of presentation. This underscores the importance about asking patients about all the signs and symptoms of Ebola disease and not just asking about the presence of fever.

Finally, bleeding is not humorously present in patients with Ebola disease. In general, it is a late manifestation and is seen in less than half the cases. Next slide.

Next, I will review the typical course of illness seen in Ebola disease. So, infection occurs after exposure to a person who is sick or died of Ebola. Next slide.

Following infection with the virus, there is an incubation period. The incubation period is between 2 to 21 days, but on average is between 4 to 17 days. During the incubation period, the infected person feels well and has no signs or symptoms of Ebola disease, and they are not considered to be contagious. Next slide.

The first symptoms that'll appear are what we call dry symptoms and include fever, headache, muscle aches, and joint pain. Once signs and symptoms appear, the patient is considered contagious and is capable of transmitting the virus to others. Next slide.

At or around day four of illness, patients develop vomiting and diarrhea, or what we call wet symptoms. At this point, the patient is very contagious.

It is important to note that the vomiting and diarrhea can be quite severe. Output has been reported as high as 10 liters per day in Ebola patients who are treated in the United States during the previous outbreaks. To minimize transmission of the virus, it is critical to identify and isolate patients with Ebola disease as soon as they develop symptoms, and especially before they develop wet symptoms. Next slide.

In fatal cases, individuals tend to die 7 to 10 days after symptom onset. It is important to note that the quantity of virus in the body at the time of death is the highest. Next slide.

Reverse transcription polymerase chain reaction, or RT-PCR, is a diagnostic test of choice for acutely ill persons with suspected Ebola disease. It is important to keep in mind the symptom onset date is critical for interpreting the RT-PCR result. A negative RT-PCR result from a blood sample collected less than 72 hours after symptom onset does not rule out

Ebola disease. The virus may not have reached detectable levels in blood until up to 72 hours after symptom onset. Next slide.

Currently, there is no FDA-licensed treatment for Ebola disease caused by Bundibugyo virus. However, there are promising experimental therapies, including MBP134, which is an experimental two-antibody cocktail therapy, and has been demonstrated to be efficacious in preventing mortality in non-human primates due to infection with Sudan virus, Ebola virus, and Bundibugyo virus.

Supportive care is also critical to improve chances of survival and early supportive care at that. Supportive care can include intravenous fluids and electrolytes, as well as symptomatic treatment for vomiting and diarrhea. Next slide.

Currently, there is no FDA-licensed vaccine against Bundibugyo virus. However, there are multiple vaccine candidates undergoing evaluation. Based on available evidence, ERVEBO, the FDA-licensed vaccine against Ebola virus is not expected to provide cross-protection against Bundibugyo virus infection. Next slide.

And next, I'll turn it over to Doctor Hsu.

Thank you. I will now talk about recommendations to clinicians presented with a symptomatic patient in the setting of the current global Ebola outbreak. Next slide, please.

First, we are asking that clinicians collect travel history for ill patients presenting with a clinical picture suggestive of an infectious etiology. For ill travelers returning from DRC, South Sudan, or Uganda, it is important to ask about risk factors for Ebola disease, which are listed here. Next slide.

We are asking health care providers to include Ebola disease in the differential diagnosis for ill returning travelers from the three countries. But at the same time, it is important to keep in mind that malaria is the most common cause of undifferentiated fever after travel to sub-Saharan Africa.

As discussed, the signs and symptoms of Ebola disease are nonspecific, and these same signs and symptoms can be seen in patients with malaria. Malaria infection can progress rapidly, so early diagnosis and treatment is key to survival. Malaria testing should therefore not be delayed.

Also, it is important to ask ill travelers about Malaria prophylaxis and adherence, but remember that a history of taking malaria prophylaxis does not exclude the possibility of Malaria infection. One important thing to keep in mind is individuals can be concurrently infected with Ebola and Malaria. Bottom line, we strongly recommend Malaria testing for any febrile traveler recently arriving from Uganda, DRC, and South Sudan. Next slide.

We are also asking clinicians to implement strict infection prevention and control measures at the healthcare facility when evaluating symptomatic suspect Ebola disease patients. These IPC measures should remain in place until Ebola testing has been resulted. Negative tests should be resulted 72 hours or more after initial symptoms, and confirmed by CDC diagnostic testing to be considered negative.

These measures are necessary to prevent spread of the virus within the healthcare facility and in the community. We will review these IPC measures in greater detail in the coming slides. Next slide.

Now we'll talk about when it may be beneficial to seek a clinical consultation. Consultation provides a forum to make a collective decision. For example, in some instances, exposure risk may not be clear. The clinical team may be helpful in categorizing the exposure risk through discussion.

As I mentioned earlier, when the decision is made to test the patient for Ebola, strict infection control measures must be put in place to prevent potential spread of the virus. These measures may limit the patient's access to care. It is also important to keep in mind that the length of time the patient remains under strict precautions can be prolonged.

For these reasons, it is therefore very important that decisions be weighed carefully before testing an individual. A clinical consultation can help with these decisions while prioritizing the patient's safety and well-being. Next slide.

If healthcare providers are concerned that their patient may have Ebola disease, we are asking that you first notify your state, local, tribal, or territorial health department and follow jurisdictional protocols for patient assessment. As such, it is important to identify points of contact and contact information for your state and local health departments now.

The CDC Emergency Operations Center can also assist in identifying contact information for state and large jurisdictional health departments, and you can reach them by calling the 24/7 phone number listed here. A web link shown on the slide is also a resource. Due to expected high call volumes, unless a clinician cannot reach their health jurisdiction, callers will be referred back to their health jurisdictions. However, if the caller has been unable to reach their health jurisdiction, they will be connected to the clinical consult team. Next slide.

Now, I will review what to expect from an initial consultation with the CDC. First, you will be connected with a subject matter expert in viral hemorrhagic fevers at CDC. One or more SMEs will also be available to provide guidance on hospital infection control practices and laboratory safety. Depending on the needs of the of the jurisdictions and the healthcare facility, SMEs from other parts of CDC can also be available for consultation. During the

call, we will discuss the patient's travel history, epidemiologic risk factors, their clinical course, and review what diagnostic testing has been performed.

We will also want to know what infection control measures are in place. Based on all this information, a collective decision on testing is recommended or not recommended. Now, you might ask, why not test everyone? When we decide to test the patient for Ebola disease, as we reviewed, strict infection control measures must be put in place that may limit the patient's access to care, and the length of time these patients [inaudible] or strict precautions can be prolonged. It takes time to get the specimen to the lab. It takes time to run the test.

Also, there are caveats when interpreting the Ebola test results. So if the specimen is collected early on in the disease course, precautions may have to remain in place until a second test is performed. It is important to stress that the decision to test the patient is a collective one. We at the CDC will make a recommendation as to whether we believe testing is warranted, but in the end, we will defer to the treating physician. Following this, we will want to get daily updates on the patient's clinical status and updates on specimen shipment. And of course, when the test results are available, we can convene a call to discuss the results and next steps. Next slide.

In summary, a clinical consultation with CDC may be beneficial for the following reasons. Consultations call upon multiple resources to contextualize your patient's epidemiological risk factors and may be able to provide additional clarity on the individual's travel and activities. As we reviewed, there's no sign or symptom that's pathognomonic for Ebola disease. And so the decision to test for Ebola disease is primarily driven by your patient's epidemiologic risk factors.

The consultation calls are also an opportunity for the clinician and the jurisdiction to ask specific questions about the process at their facility. If testing is pursued, the clinical team can help facilitate LRN presumptive testing or CDC confirmatory testing with the clinic and health jurisdiction. Now I will hand it over to Dr. Schaefer, who will talk about infection prevention and control. Thank you.

Thank you very much. Next slide, please.

I want to start by orienting you to where you can find the health care infection prevention and control recommendations on the CDC website. If you go to CDC's main viral hemorrhagic fever resource directory, the URLs on the screen, you'll see headers at the top. The header for health care providers is where all of the health care infection prevention and control guidance documents that I'm going to be discussing are located. But I do want to note that there's also a header for public health. And you can see on the screenshot there,

that's where the guidance for lab testing is available. And it's also where important information about our traveler management guidance for this outbreak are available, as well as recommendations for organizations that are sending U.S.-based healthcare personnel to areas with viral hemorrhagic fever outbreaks. That guidance outlines how to support the health and safety of these healthcare personnel before, during, and after their trip. Next slide.

The URL at the bottom is our main healthcare infection prevention and control guidance for viral hemorrhagic fevers. This is essentially the same guidance that we developed back for the 2014-2016 Ebola Response. But in the last few years, we extended the scope of this guidance that is no longer Ebola specific, and it's now framed as viral hemorrhagic fever guidance, inclusive of other viruses like Marburg, Lassa, and several others that we specify at the top of the guidance. This guidance is intended to apply to all health care personnel, including environmental services, EMS providers that are working in U.S. healthcare settings and providing care for patients with suspect or confirmed viral hemorrhagic fevers. Next slide.

The framework that we use when we think about this is the identify, isolate, and inform framework that I'm sure you're all very familiar with. You already heard from Dr. Hsu a little bit about the importance of identification. Early recognition and identification that these people could potentially have a viral hemorrhagic fever is important to implement the appropriate infection control practices. Implementation of those practices are helping to protect healthcare personnel in your facility, other patients, and visitors.

So a travel history and asking about these other exposures is really critical here. And I know, you know, the U.S. healthcare facilities, you all have kind of a standard screening process for early recognition and management of potentially infectious people that walk through your door. And this is a great opportunity to test that system. It doesn't help if your staff are entering the travel history and the electronic medical record, but then that doesn't trigger the necessary steps to isolate and do the things that that trigger should cause or result in. Next slide.

Once you've identified a patient with a potential viral hemorrhagic fever, prompt isolation is really critical here. We recommend placement of these patients in a single person room with the door closed. Ideally, that room will have a private bathroom or a covered bedside commode. And also really importantly, outside that room, either in an anteroom or somewhere else, you'll have adequate space for staff to be able to safely put on and take off all the PPE that is recommended for the care of these patients. Next slide.

So now we've isolated the patient, so we go on to inform. Dr. Hsu already talked about the importance of prompt public health consultation and gave you contact information both for CDC and how to find your local health department contact.

But I also want to mention the importance of knowing who in your health care facility system needs to be made aware if a patient is presenting for care. Presumably, that's going to be the head of your infection prevention and control program, as well as other key leaders in the facility. And you should also know with that contact list, who is the entity or individual that is responsible for notifying public health. Again, making sure that you've got that ironed out so that it's actually done and there's not assumptions that somebody called that maybe didn't. Next slide.

Now I want to talk about the personal protective equipment for viral hemorrhagic fevers. There are two main guidance documents on the CDC website. The first one is what we call our Dry and Suspect guidance. It's for clinically stable patients suspected to have VHF. So this is if a patient that you suspect to have VHF but is not yet confirmed shows up, they're clinically stable, they're not having the wet symptoms that Dr. Choi talked about, like vomiting, diarrhea, bleeding. So this PPE ensemble would apply the Dry and Suspect. And that's the second link that you see on the slide there.

Once a patient is confirmed to have a viral hemorrhagic fever, or if they're still being worked up but they're clinically unstable, or they have those wet symptoms like vomiting, like diarrhea, like bleeding, we switch to the PPE guidance for confirmed patients and those that are clinically unstable. And that, again, is the first link on the slide there.

I encourage you to take the time to look at those guidance documents. There is a tremendous amount of detail there, walking you through different PPE ensemble options and the steps, options for how to safely put them on and remove them. You should be familiar with what ensemble your facility uses, and staff that will be caring for these patients should have trained on this ensemble so that they're comfortable with what they're supposed to do. There are also a link on the slide to several videos that we developed in collaboration with partners in 2014, that walk you through in a video fashion, you know, options for how to put them on and take them off. But again, you really need to know what the protocol is in your facility that you have trained on, which may look a little bit different than what the options are on the CDC website. Next slide.

The infection prevention and control recommendations that we have for healthcare personnel are incredibly effective at protecting healthcare personnel. But exposures can still happen, either before a viral hemorrhagic fever is considered and precautions are put in place, or during care if there is an accidental lapse during care, you get a glove tear,

there's a needle stick injury, something else happens, those are opportunities for exposure. So we do recommend keeping track of all healthcare personnel, including EVS and others who enter the room of these patients or otherwise have contact with their blood or body fluids so that those people can be monitored for at least the 21 days after their last contact with the patient or their blood or body fluids. Certainly, if an individual has what we deem a high risk exposure, like I said, a needle stick injury or unprotected contact with the blood or body fluids of the patient, that requires urgent occupational health assessment, engagement with public health, discussion about work restrictions, and other management of this individual. Next slide.

I mentioned before that we recommend monitoring of all of these people. And so that can be quite cumbersome and time intensive, particularly if a lot of healthcare personnel get involved in the care. So we do recommend doing what you can to safely care for the patient, but also limiting the number of healthcare personnel that are in and out of the room or involved in the management or the direct contact with the patient. If exposure management and risk assessment does become necessary, this is where your public health partners can also be helpful.

Some states have already developed monitoring tools as part of prior viral hemorrhagic fever responses. In addition, CDC worked with several health departments to adapt a REDCap template to help support exposure assessment and monitoring, and we shared those with health department programs. That tool was actually adapted and used as part of a 2024 Iowa response to a travel associated case of Lassa, and the MMWR is on the screen if you're interested in reading more about that. Next slide.

So for environmental infection control for viral hemorrhagic fevers, again, as I mentioned, if environmental services are involved in cleaning and disinfection of the room or handling of waste, they also need to be part of your training on PPE and the recommended IPC practices.

We recommend using an EPA-registered disinfectant from the emerging viral pathogens list or list Q, which is on the EPA website. We've put a link on the slide there and you can go and look and see what disinfectants meet that criteria. This guidance document has additional recommendations for cleaning spills and other things. Next slide.

As far as handling VHF associated waste management, so healthcare facilities ultimately need to comply with federal, state, and local regulations for the handling, storage, treatment, and disposal of VHF associated waste.

The Department of Transportation considers Ebola waste to be a Category A waste. And what that means is it requires special handling and a special permit to transport that. This

is something that your waste management company should be aware of, and that's something that you can reach out to discuss with them in advance, just to understand kind of what is involved with that. The guidance that I've linked to on the page outlines all of the steps that we recommend for how to safely treat, contain the waste. But again, you do need to be aware of what your local regulations are and what your waste management company also requires.

And just something to consider, you know, often if a person presents and is being worked up for viral hemorrhagic fever, say in the emergency department, what healthcare facilities have often initially done is pending the testing or pending the evaluation, they'll hold that waste in a secure location during that rule out period. If the patient is ultimately determined to not have Ebola or viral hemorrhagic fever, then you can go ahead and handle that waste as you normally would. But if they ultimately are found to have Ebola, then that Category A and the treatment and all the extra steps would apply and you've already got it in kind of a secure location. Next slide.

Hopefully we won't need this guidance, but again, just to orient you to the site and what is available. We do have guidance about Safe Handling of Human Remains of VHF Patients in U.S. Hospitals and Mortuaries that extends beyond health care to address transport, mortuary care, travel, and final disposition of the body. Next slide.

And then this is just a link of all the different guidance documents and resources that I presented during the presentation. And now I'm going to go ahead and hand it over to Dr. Schuh to talk about the lab.

Next slide, please.

All U.S. laboratories that handle patient specimens must follow OSHA's Bloodborne Pathogen Standard to reduce the risk of exposure to bloodborne pathogens, including Bundibugyo virus. Before accepting specimens, the laboratory should complete a site-specific risk assessment, and this helps identify where staff could be exposed to sprays, splashes, or aerosols generated during routine laboratory activities. Once risks are identified, they should be reduced by implementing engineering controls, administrative and work practice controls, and appropriate personal protective equipment. Finally, the laboratory must have a waste management plan in place before work begins so that potentially infectious materials are handled, stored, and disposed of safely. Next slide, please.

Public health authorities will determine where orthoebolavirus testing will be performed. Whether at an LRN laboratory, CDC, or both will depend on the situation and the testing needs. All specimens collected from patients with suspected Ebola disease must be

packaged and shipped as Category A infectious substances and handled as non-select agents. Proper packaging, labeling, and shipping procedures are critical to protect personnel and maintain compliance with transportation regulations. Laboratories should also consider all applicable shipping requirements before sending specimens for routine diagnostic testing that is unrelated to orthoebolavirus testing. This is especially important when referring specimens to laboratories that may not be aware of the patient's clinical context or potential Ebola infection. Next slide, please.

Presumptive testing for orthoebolaviruses, including Bundibugyo virus, is available at select LRN laboratories. When submitting whole blood EDTA specimens to a LRN laboratory for Ebola virus testing, specimens should be refrigerated at 2 to 8 degrees Celsius and then shipped on cold packs to maintain specimen integrity during transport. Confirmatory testing for orthoebolaviruses, including Bundibugyo virus, is also available at the CDC.

For specimens being submitted directly to CDC for Bundibugyo virus testing, whole blood EDTA specimens must be frozen at or below minus 20 degrees Celsius and then shipped on dry ice. Next slide, please.

Microscopic examination of thick and thin blood smears is the gold standard diagnostic test for malaria and is important consideration when evaluating patients with suspected Ebola virus disease who may also be at risk for Malaria infection. Laboratory staff can safely perform Malaria testing by following OSHA's blood-borne pathogen standard, including the use of appropriate personal protective equipment and performing specimen manipulations inside a certified biosafety cabinet.

It is also important to recognize that standard protocols used to prepare and stain thick and thin blood smears do not sufficiently inactivate orthoebolaviruses, including Bundibugyo virus. Because of this, laboratories should ensure that appropriate biosafety precautions are maintained throughout the testing process. Next slide, please.

There is currently no modified protocol recommended to inactivate orthoebolaviruses in thick smears. However, for thin smears, the modified protocol includes important safety considerations. First, thin smears should be fixed in 100% methanol, for a longer fixation period, ranging between 15 and 30 minutes. Second, Triton X-100 at a 5% concentration is added to the Giemsa stain. And we recommend that after staining and rinsing, the slides should be allowed to air dry completely. You should not use a hair dryer or fan to speed the drying process, as this may create a risk of aerosol generation. After the slides are fully dry, cover slips with rapid drying mounting medium may be applied prior to examination.

Back over to you, Nikki.

Presenters, thank you very much for providing this timely information to our audience. We will now go into our Q & A session. Audience, you may ask questions via the MS Teams platform. As a reminder, the ability to ask a question during the live webinar is limited to the first 1,000 attendees who joined the webinar. If you are unable to ask a question during the webinar, you may submit your question after the live session by emailing coca@cdc.gov.

Our first question. Does CDC recommend that freestanding primary care practices not associated with hospitals screen all visitors for travel and symptoms?

Yeah, this is Melissa. I'll start and Chris, please jump in if you had anything to add. It goes back to what I talked about before, which is any of your healthcare systems out there should have a system in place for early recognition and management of potentially infectious individuals that come through.

So if you have someone who is presenting with fever or other symptoms, taking a travel history is an important part of kind of coming up with your differential and making sure that you're managing that patient correctly. You know, we hope and don't expect that any patients with viral hemorrhagic fever are going to show up at your primary care clinic, but you need to be prepared for patients with potentially infectious conditions to walk through your door and have a plan for how you would manage them or get them transferred for care.

Yeah, and to add on to that, you know, as we mentioned, Malaria is the most common cause of fever in a returning traveler. And it's critical to identify Malaria patients early to get them to, to get them the treatment that they need to prevent additional morbidity and mortality. And so, you know, travel history is a very important part of even considering Malaria. So, you know, we strongly recommend that even outside of this outbreak, that travel history is a question that is asked of all patients that are being seen in the healthcare setting.

Thank you. Our next question. Can you please repeat the airports where travelers will be screened in the United States and the countries where they would be traveling from?

Yeah, thank you so much. This is Peggy Honein. So travelers who have been in South Sudan, the Democratic Republic of Congo, or Uganda in the past 21 days are being redirected to go to enter the U. S. during in one of these limited number of airports. So American citizens traveling in would be directed to Dulles Airport in Virginia, Atlanta Airport in Georgia, Houston Airport in Texas, or starting tomorrow, JFK Airport in New York will also be. So those are the four airports where American citizens who have time in one of these three countries in the past 21 days would be redirected for screening.

Thank you. Our next question. Can Ebola infect pets such as cats or dogs and other animals like rats?

Yeah, that's a good question. You know, in terms of the available data that we have for domestic pests and particularly cats and dogs, there's no definitive evidence that this infection has occurred in these animals.

In Gabon, during one of their outbreaks, many years ago, the outbreak was particularly bad and there were deceased individuals like lying on the streets and other places and dogs were actually witnessed, you know, maybe in close contact with these dead bodies. And they were not able to identify any sort of infection in the dogs from that exposure. So the evidence that we have as of now is that dogs and cats are not a concern, but it's something that continues to be evaluated.

Thank you. Our next question. Are PCRs strain specific and how many labs in the United States have the capacity for testing?

Thank you. I can take that question. So 41 LRNs have the capacity to test for Bundibugyo virus using the BioFire Global Fever Special Pathogens Panel or the Warrior Panel. And that panel gives a presumptive result for the identification of the orthoebolaviruses, which does include Bundibugyo. And then CDC has confirmatory testing available for Bundibugyo virus that is scheduled to come online very soon, as well as Ebola virus, formerly known as Ebola Zaire, and Sudan virus.

Thank you. This is a two-part question. Is CDC notifying states who then notify local health departments of travelers to monitor? And are they then required to make in-person contact within 24 hours of arrival and then do twice daily active monitoring for 25 days?

So this is Peggy Honein. We have several guidance documents that we can share after this meeting. So they're posted on CDC's website with the guidance to states about screen travelers. So there is one set of guidance for non-governmental organizations that may be sending staff, including health care workers, to one of these areas about before and after travel.

One is for people with known high-risk exposures, and then one is more the interim guidance for people who were in one of these countries but didn't have specific, identified high-risk exposures while they were there. So depending on their screening questions, there are slightly different recommendations for different groups, but it doesn't require in-person screening at this point in time. It gives some guidance to health departments about what we think is appropriate for checking in. CDC is pushing text messaging out to people that have been travelers that have been screened and also the contacts so that if a traveler develops symptoms or is concerned, they have a contact to reach their state or local health department. And as Dr. Hsu said, if you have questions, health care providers, we do ask you to connect with the state or local health department first, and they will pull in CDC

as needed. If it's an urgent situation, and you're not able to reach them, our clinical team is happy to also support. Thank you.

Thank you. Our next question. If you're a health care worker who has traveled to Africa, are there any recommendations for returning to work?

Yeah, so this is Melissa. I would suggest taking a look at those guidance documents that I mentioned under that public health header, which is the travel management guidance. That will let you understand kind of where the risks areas are, what's considered a high-risk exposure versus not.

But in general, if healthcare personnel are over there for recreational reasons or other things and don't have what we consider a high risk exposure, again, see that webpage, we don't have a recommendation that they be work restricted. There will be monitoring recommendations if they were in the outbreak area, and we absolutely recommend that they inform their employer and their occupational health program so that they know where that worker was and what they were involved with. Your healthcare facility may choose to be a bit more strict or implement some restrictions at their own discretion, even if it's not, you know, otherwise recommended by CDC. So again, take a look at those guidance documents, because I think they spell out how we define the different exposures. But in general, if they did not have a high-risk exposure over there, they wouldn't necessarily need to be restricted from work.

Thank you. Our next question. Do pediatric patients present differently from adult patients, and do they have similar outcomes?

Yeah, thank you. Thank you for that question. You know, we would say that in general, kids tend to be not as infected. There's not as many pediatric Ebola patients during outbreaks compared to adults. So the data set is going to be smaller. It doesn't appear that they have a very different clinical course. So the symptoms that we see in adults with Ebola are similar to the symptoms that we see in children for Ebola. But we have seen some differences in outcomes and the children tend to have higher mortality, but part of this might be related to care seeking.

You know, in prior outbreaks, we have seen that sometimes parents or other family members will not list their children as contacts. And part of it might be because they are concerned that if they list your child as a contact, the child will be taken away from them. And so we have seen sort of later presentations to care for some children. And that could be contributing to the mortality.

The only caveat to all of this is, you know, we, you know, we have seen several newborns that were born to mothers infected with Ebola, who were then, you know, born alive. And

sometimes it's been a bit challenging to determine when those children actually became sick. And so, you know, there are several examples where a newborn is born to a mother infected with Ebola. They, you know, the healthcare providers feel that the child is fine and is not acting ill, but then very suddenly becomes critically ill and dies. And so, you know, it might just be a little bit of, you know, unable to kind of perceive when newborns are ill because, you know,they are newborns. And so detecting illness in a newborn potentially could be a little bit more difficult than in a growing child. But in general, their clinical presentation in children is similar to those in adults.

Thank you. Our next question. What are the isolation precautions for Ebola? Airborne contact or just contact?

Yeah, this is Melissa. So it's a little bit more complicated than that. It depends a little bit on what stage of the illness they're in and those two different PPE guidance documents that I mentioned. So for those clinically stable, dry, kind of suspect cases not yet confirmed, we recommend a gown or coveralls, a full face shield, a face mask, and gloves with extended cuffs for those individuals, right? So eye protection, a face mask, gown, and gloves and coveralls.

But for the patients that are confirmed to have Ebola, or are not yet confirmed, but are clinically unstable or have those wet symptoms, we move to that other PPE guidance. And in that situation, we recommend that they wear either a N95 respirator or a PAPR and, you know, additional PPE on there with gloves, coveralls, boot covers, you know, whatnot. So I recommend you look there. We also recommend that the person be placed in an airborne infection isolation room if one's available. And the reason we recommend the respiratory protection and the airborne infection isolation room when they're confirmed or when they get to that sick or wet stage is because as you heard from Dr. Choi, these people become very sick. They often require intubation and other invasive medical management and procedures that we would consider quote unquote aerosol generating procedures. And so the use of the respiratory protection and the placement in the airborne infection isolation room give you additional air changes per hour and give you additional respiratory protection during those aerosol generating procedures. So again, look at the guidance, it differs a little bit depending on what stage of illness they're at and if they're confirmed or not. Thank you.

Thank you. And we have time for one more question. This is a PPE related question. Is it acceptable to use level 2 gowns if it's ANSI/AAMI PB70 or does it have to indicate it's a level 3 gown?

So I'd have to look at our website for the dry PPE or the clinically stable, we do recommend a level 3 gown or fluid resistant gown. And we outlined, you know, the ANSI/AAMI standard

and some additional information there. If we are going into the wet PPE, we do recommend an imperial gown or coverall, which I believe is a level 4. Again, please look at that guidance and that website that outlines the standards there. Thank you.

Thank you. And thank you to the rest of our presenters for answering these questions and for sharing your expertise with us today.

The fully closed-caption video and transcript of today's COCA Call will be available on demand next week at www.cdc.gov/coca.

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Thank you for joining us for today's call.