

**CENTERS FOR DISEASE CONTROL & PREVENTION (US)**

**Moderator: Leeanna Allen**  
**October 23, 2014**  
**2:00 pm CT**

**Coordinator:** Welcome and thank you for standing by. At this time, all participants are in a listen-only mode. During the question and answer session of today's call, you may press Star 1 to ask a question. Today's conference is being recorded and at this time we'll turn the call over to Leeanna Allen. You may begin.

**Leeanna Allen:** Good afternoon from Atlanta, Georgia. My name is Leeanna Allen and I'm from the Centers for Disease Control and Prevention's Emergency Operations Center. I'd like to welcome you all today to the Emergency Partner Call for the Private Sector and thank you for joining us. We are already full, so we appreciate your patience as we tried to get as many people on the line as possible.

Our goal today is to address specific concerns that private sector organizations and businesses may have regarding the Ebola outbreak in West Africa and we are very fortunate to have some great subject matter experts with us today to provide information and updates. First, we will hear from Dr. Dr. Kashef Ijaz from CDC's Center for Global Health and we'll also hear from Mr. Jed Meline from the US Agency for International Development or USAID. We'll hear

from both speakers before beginning the question and answer portion of the call and during that time, we will take questions from callers and answer some of the about 150 questions we received via email.

We will regret that we will not likely be able to get through all of those questions during this time but we encourage you to visit CDC's website, [www.cdc.gov/ebola](http://www.cdc.gov/ebola) to find out the latest information. You can also contact CDC Information by email or phone with your questions. If there are any media on the line, please call the CDC Press Office at 404-639-3286. We will be sending a summary of the call via email as soon as it is available. Please feel free to forward the summary to others and email [emergencypartners@cdc.gov](mailto:emergencypartners@cdc.gov) if you do not receive a copy. So let's get started.

Dr. Kashef Ijaz is the principal deputy director for the division of global health protection in the CDC Center for Global Health. This division includes some of CDC's primary global health programs such as global disease detection, field epidemiology training, global health security and humanitarian emergencies and recovery work. Dr. Ijaz is a member of the division senior leadership and oversees the science and research agenda for the division to ensure that the scientific project, protocols and epidemiologic investigations are conducted based on established scientific methods.

Dr. Ijaz will provide an update on the Ebola epidemic in West Africa, recent developments in the United States and address questions relating to private sector concerns and support. So at this time, I would like to turn the call over to Dr. Ijaz.

Dr. Kashef Ijaz: Thank you very much and good afternoon everyone. In the next 20 minutes or so I'm actually going to go ahead and provide you with an update on Ebola and then I'll turn it back to Leeanna and then Leeanna will actually take it on

from there in terms of introducing the next speaker and any questions and answers as well. So with that, this is the largest recorded Ebola outbreak in the history and it is the first Ebola epidemic the world has ever known. CDC's response to the Ebola is the largest international outbreak response in the CDC's history and on August 8, the World Health Organization declared that the current Ebola outbreak is a public emergency of international concern.

It is indeed a disaster unfortunately in terms of the Ebola outbreak in the three countries which are most affected which are Sierra Leone, Guinea as well as Liberia. The total number of cases as of 10/22 is 9,901 cases and of those, there are 4,865 deaths. The Ebola crisis is derailing not only the lives but livelihoods in some of the most vulnerable communities in the world. Fears of infection have disrupted normal economic activity in Liberia, Sierra Leone and Guinea and the broader global community.

The CDC has been working with our partners in not only the US government but also primarily with the Ministries of Health of the affected countries, WHO, Médecins Sans Frontières (MSF) and the other regional and international partners to provide epidemiologic, health communications and laboratory support to interrupt and mitigate the current Ebola virus transmission. There are several challenges to this outbreak which are related to the overburdening of the public health and healthcare infrastructure and inefficient use of stakeholders. There are issues also related to the local beliefs as well as denial among the local community about Ebola.

There's also fear and superstition and then there are other outbreak challenges related to the porous borders, high population mobility and geographic threats. However, in the face of these challenges there is also the silver lining to the dark cloud which is depicted by the fact that as of Monday, 10/20, the WHO

officially declared Nigeria Ebola-free, which demonstrates a big success in the effectiveness of the rapid detection, contact tracing as well as isolation.

The two US healthcare workers that have tested positive for Ebola are both in stable condition. The NBC reporter has been released from the Nebraska hospital and there are no new cases since the two Dallas nurses have been reported. The 48 original contacts of the first patient, Mr. (Dunkin), have now exited the 21 day incubation period. The Dallas lab worker who handled the specimens and went on a cruise within the 21 day period tested negative as well.

In addition to that, the White House has named Ron Klain as the Ebola czar to lead the frontal response and coordinate the many agencies involved which include CDC, FDA, Department of Defense, USAID, Development of Homeland Security, et cetera. CDC has also issued new guidance for healthcare workers as well as also issued updated movement and monitoring guidance as well.

CDC has been leading the public health response portion of Ebola which includes epidemiologic, laboratory, communications and running the emergency operations center at capacity. CDC at present has deployed over 200 staff in the field and there are more than 300 staff at the headquarters which are supporting this outbreak, as well as their colleagues in the field. It is the largest international deployment in the CDC's history. CDC is also very much engaged along with USAID in building capacity in countries that will both address the current need as well as prevent future outbreaks of this size.

CDC along with the US government partners and international partners, are committed to promoting global health security and we are focusing on improving nations' abilities to prevent, detect and respond to infectious

disease threats. They will be better prepared so that they are better prepared to quickly identify and mitigate new epidemics. Moving forward, we will be working with partners to improve preparedness throughout the region. We are working with agencies to ensure our activities are coordinated. The USAID and Department of Defense, they are working on a new outreach to the private sector as evident from this call as well as the non-governmental organizations or NGO's on how they can assist in this response.

The developments in Dallas prompted us to increase our efforts to ensure that domestic healthcare workers and hospitals are properly trained and that they meticulously follow guidelines while triaging potential Ebola patients or providing care to confirm the Ebola patients. CDC has also been establishing rapid response teams that can be onsite to help any hospital with an Ebola patient. The Department of Defense is also training a 30 person medical response team which is designed to be deployed nationally in case anyone else in the country is diagnosed with Ebola.

We have resources available online for travelers as well as individuals living in the region. We have been working very closely not only with our international partners and US government but we are also working very closely with our private corporations who have been partnering with us in finding and trying to find out and helping out as to how they can actually assist with controlling this outbreak.

It is also pretty evident that they have been critical to supporting the efforts to control this outbreak as is evident from the latest mobility and mortality weekly report which basically highlights one of the private sectors response and helping with the response of controlling this outbreak. I want to thank everyone for giving me this opportunity to provide you with this quick update and with that, I'll just stop and turn it back to Leeanna.

Leeanna Allen: Thank you very much. I'd now like to turn the call over to Mr. Jed Meline from USAID. He serves as the Acting Deputy Assistant Administrator in the Bureau for Democracy Conflict and Humanitarian Assistance and he's also the director of civilian response where he oversees USAID's civilian surge capacity to respond to complex crises around the world. With a team of highly trained crisis surge support staff, he oversees efforts to rapidly bolster USAID and the US government's capacity to help countries prevent, respond to and recover from crisis. He will be discussing USAID's efforts in West Africa and offer guidance on how the private sector can help. So I would now like to turn the call over to Mr. Jed Meline from USAID.

Jed Meline: Thank you very much Leeanna. It's a pleasure to be here today and thank you Dr. Ijaz for the great overview. Again, my name is Jed Meline and amongst the other things that Leeanna mentioned, I'm also the coordinator for private sector outreach within USAID regarding the Ebola response in West Africa. A couple of quick highlights and some thoughts on the private sector. Just to add to what Dr. Ijaz said. USAID is the leading United States response to the Ebola outbreak in West Africa along with Department of Defense, Department of State, CDC and other agencies and a whole government approach to this national security priority.

Obviously our first focus of efforts is on controlling the spread of the disease, bringing labs for specimen testing, supporting construction and management of Ebola treatment units, airlifting critical relief supplies, et cetera. The total United States humanitarian assistance for the Ebola crisis right now stands at about \$345 million including \$142 million announced last week by our administrator, Rajiv Shah. It also includes about \$121 million dedicated from the Department of Defense at this time.

That has enabled the United States to deploy more than 750 personnel including those from CDC that Dr. Ijaz mentioned earlier. We have increased the number of Ebola treatment units in the region to 12 in Sierra Leone and Liberia. We have increased -- this is a critical piece in terms of turning back the epidemic in the first step -- to 65 the number of safe burial teams which are now working across every county in Liberia to safely and respectfully dispose of bodies which are a great source of infection.

We've expanded the pipeline of medical equipment and supplies in the region airlifting more than 200 tons of personal protective equipment, infrared thermometers, chlorine, plastic sheeting for Ebola treatments, et cetera. Also equally critical to the scaling up of the response to control the epidemic, we have received and pass through interested humanitarian organizations information for more than 3,700 volunteers willing to provide healthcare in the affected countries. It has filled up and we are making great progress especially in doubling the number of ETU's over the last few weeks to begin to turn the tides but there's much more to be done.

I think I'll pause there and just talk a little bit about ways that we can maybe bring the private sector further into the fold and help energize our efforts to turn back this tide in West Africa. First and foremost, financial contributions to the organizations participating in the response is by far the most effective and efficient avenue to make a difference. If you were interested in donating, we've a couple of places we might direct you. Obviously if you want to fund the UN efforts, and UNMEER is standing up and taking over the entire response to which USAID, US government and DOD will be supporting. Their efforts can be funded at Ebola response under the UN website, [un.org](http://un.org).

If you're interested in supporting one of the NGO's that's directly providing relief on the ground, there's a list. It's available at Center for International

Disaster Information or [cidi.org](http://cidi.org) and you can also give to the CDC Foundation at [www.cdcfoundation.org/givenow](http://www.cdcfoundation.org/givenow) who is also providing critical relief on the ground and again, just to reiterate, financial contributions are the quickest, fastest, most efficient and most effective way to make a difference on the ground to those organizations engaged. In addition, I know there's interest in many private sector organizations to provide what we call key material and technical needs or in my shorthand, staff or stuff.

First and foremost among those, for the private sector organizations that have medical personnel, one of the key ways you could help would be to encourage your staff with clinical or public health skills to consider volunteering to staff the Ebola response. Those individuals can volunteer online at [usaid.gov](http://usaid.gov) or with one of the many NGO's responding to the crisis and we wouldn't want to encourage individuals to go on their own but to link up with an organization. Again, many of those organizations can be found at [cidi.org](http://cidi.org).

A couple of areas of commodity needs that we know we will have and will continue to have and I would note that the commodity needs change over time, actually fairly rapidly and so this is just a tentative list and even a week from now it might be slightly different. That being said, obviously personal protective equipment and other critical medical and hygiene supplies that meet critical specifications could be helpful in the response if you're a company that works in that regard. Transport and logistics, particularly, for those companies in one of the affected nations. In country logistic capacity to monitor and move response commodities would be very helpful.

There are some issues with data and cell coverage in the affected countries and scoping and provision of enhanced information management and telecommunication capacities is another area where the private sector might have a very specific role to play and lastly, air bridge and commercial

transport. We have managed to establish a humanitarian air bridge but the commercial air bridge is stopped and maintaining the economic efforts in the country is critical to keeping these countries stable and moving forward. So those companies that have capacities in this regard, that could be very helpful.

A few other things they might ask of the private sector as well because those that have activities in the country, are in the country or have supply chain coming through the country, any way to work together in order to keep those economic functions moving in an appropriate and safe way would be very much appreciated. Mitigating the second order impacts of this crisis is a key aspect of the US government's strategy and that's definitely a clear role that the private sector can play.

Lastly, and I might ask for those companies and I'm sure many of you already have contributed either financially or in-kind. I would encourage you to go to the UN financial tracking service website and log it there so we can keep track of the companies and the generous donations they have made, perhaps give you credit and help identify what might be in the pipeline that we're not aware of so that we don't duplicate efforts and that can be found at [www.fts.unocha.org](http://www.fts.unocha.org) is where the financial tracking service can be found for donations that have been made or are in progress and with that, I will close for the moment and be happy with Dr. Ijaz to take any questions you may have. Back to you, Leeanna.

Leeanna Allen: Thank you very much. Dr. Ijaz, I was wondering if you could talk a little bit about how Ebola is transmitted and whether there's any risk to people who handle money or documents or mail?

Dr. Kashef Ijaz: Thank you very much for the question Leeanna. So in general, the transmission of Ebola is a person is infectious when they are symptomatic.

There are controlled measures which can prevent exposures to these body fluids. Ebola is spread through direct contact through broken skin or unprotected mucous membranes with a sick person's blood or body fluid including urine, saliva, sweat, feces, vomiting and semen, contaminated objects like needles and syringes, infected animals by contacts with their blood fluids or infected meat. Generally, mosquitoes or other insects they cannot transmit the Ebola virus. It is not believed that pets like dogs and cats are of significant risk for Ebola.

Now coming to your specific question about currency, I mean, there are no data on the Ebola virus being spread via contaminated paper currency. Scientific research has previously shown that paper can be contaminated with both bacteria and cocaine, et cetera. Money is not sterile. It is important for people to act with regular hand hygiene protocols they would normally follow.

When handling currency, you should wash hands frequently or use an alcohol-based hand sanitizer, avoid contact with blood and bodily fluids of any person -- particularly someone who's sick -- do not handle items that may have been in contact with an infected persons body or blood fluids, blood or body fluids. Any currency obviously contaminated with blood or body fluids should be assumed to be infectious with germs. It is more likely that people handling currency will be exposed to more germs like flu virus and cold germs than Ebola.

Leeanna Allen: Thank you very much. We will now move into the question and answer portion of today's call and what we're going to do is alternate questions from the phone with those that have been submitted via email prior to the call. So operator, if you would, please open the line for questions and we'll start with an email question.

Coordinator: Thank you. We will now begin the question and answer session. If you would like to ask a question, please press Star 1 and record your name clearly. To withdraw your question, you may press Star 2. Again, press Star 1 to ask a question and one moment please for our first question.

Leeanna Allen: Thank you Shirley. Before we go to that first question on the phone, I would also like to mention that we are very fortunate to have Ms. Abbigail Tumpey from CDC's National Center for Emerging and Infectious Diseases to help us out with our Q&A. So I'd like to start with one question we received over email from many of you. What should the private sector be doing to prepare for Ebola or are there things the private sector should be doing that would be good for any kind of emergency?

Dr. Kashef Ijaz: Thank you for the question. In terms of the private sector, I mean, if there are people which are actually going to be going out to the West African countries in terms of business critical missions, they should be oriented about the signs and symptoms of the disease as well as they should also check on whether they actually have proper insurance available to them so that in case they are actually to get sick, they can actually be medevac'd from there. If they are US citizens, the Department of State as well as the Embassy would be a good contact for them to get in touch with in order to get medevac'd and get evacuated back to the United States.

In the meantime, I do know that for instance in some of the countries, there are people at shipping units which are being set up and they are going to be primarily dealing with any of the healthcare workers who are actually helping with the response, if they do get sick then they can be treated over the preliminary but the US mission would be there to actually help them in terms of getting evacuated but on the return when people actually return back to the United States, if any of the workers from the private sector come back to the

United States, there are now movement and monitoring guidance which has been provided by CDC and was published this week. The public authorities will begin active post arrival monitoring of travelers whose travel originates from Liberia, Sierra Leone and Guinea. Six states, New York, Pennsylvania, Maryland, Virginia, New Jersey and Georgia is where approximately 70% of the incoming travelers are headed and they've already taken steps to plan and implement active post arrival monitoring which will begin on Monday, October 27.

As part of this monitoring, travelers who are returning will be required, from these countries, will be required to report the following information daily which would be their temperature in the morning and in the afternoon, the presence or absence of any of the Ebola symptoms such as headache, joint, muscle aches, weakness, diarrhea, vomiting, stomach ache, lack of appetite or abnormal bleeding and if they're actually intending to travel to another in state or out of state, they should actually report that too. In an event that a traveler does not report into the local state or local health department officials, they will actually take measures to locate the individual to ensure that the active monitoring continues on a daily basis.

In addition to that, the travelers will be returning back from these countries, they will also receive what is called a CARE kit which is a Check And Report Ebola kit at the airport that contains a tracking log, pictorial description of symptoms, a thermometer, guidance for how to monitor with a thermometer, a wallet card on who to contact if they have symptoms and they can present to healthcare provider and health advisor infographic on monitoring health for three weeks.

Leeanna Allen: Thank you for that question. I think we're ready for our first question from the phone.

Coordinator: Our first question comes from (Carol Spear) with OSAP. You may ask your question.

(Carol Spear): I would like to know how long the virus lasts outside of the body both in the puddle of blood or puddle of semen or whatever or on dry articles.

Dr. Kashef Ijaz: So thanks for the question. I mean, in terms of the virus being viable, it can actually last there for hours and that's what we know and I'm actually going to ask Abbigail too.

Abbigail Tumpey: Yes. This is Abbigail Tumpey. So even though this is a virus that's very viscous in the body, this is a virus that's very wimpy in the environment. So it's not a virus like Norovirus that's going to stay on surfaces for an extended period of time and actually studies in Ebola treatment units in West Africa, we actually weren't able to find live virus. So we don't think that surfaces are something where people are going to pick up the disease. It's really through that direct person to person contact with an individual who is ill.

Leeanna Allen: Thank you. Moving to our next question that we got via email, if I'm on a plane and the person next to me sneezes or coughs, how much of a risk is that for Ebola?

Dr. Kashef Ijaz: Yes. Thanks for that email question. So airline travelers in the United States are extremely unlikely to be infected with the Ebola virus. CDC believes that there's minimal risk to passengers on the same plane as an infected individual. Ebola can spread by an infected individual only when that person is sick with fever and other symptoms. Ebola is not as infectious as flu or common cold. In terms of how easily this infection can spread from one person to another is directly related to the level of virus in the body. So for instance, on day one of

illness, when a person develops fever, the level of virus in the body is fairly low although it's not zero and then as a person gets more sick with Ebola and the symptoms become more intense, the virus level increases in the body and fluids from the person's body becoming more infectious.

Leeanna Allen: Thank you. We'll go to our next question on the phone.

Coordinator: Thank you and that comes from (John Paul) with Lee Contracting Group. You may ask your question. (John), please check your mute feature. At this time, he is not responding. We'll go ahead with the next question and that comes from (Aaron Emmitt) with ELS. You may ask your question.

(Aaron Emmitt): Yes. I'm curious for airport employees offering or maintaining lavatory service equipment. What if any additional protection measures are recommended?

Leeanna Allen: We're having a hard time hearing the question.

(Aaron Emmitt): Yes. My question was for airport employees operating or maintaining lavatory service equipment. What if any additional protective measures are recommended?

Dr. Kashef Ijaz: In terms of - I mean, I would be - I would suggest being careful and using the universal precautions. Are you talking more about the cleaning crew? Is that what you're talking about or if someone visits the lavatory?

(Aaron Emmitt): Anyone who could, I guess, have potential exposure to the lavatory fluids that would be operating the equipment, that services the airplane or the maintenance workers?

Dr. Kashef Ijaz: Okay. In terms of the laboratory, I mean, you should talk about the labs. The people who are working in the labs should actually be using the bathrooms. I'm sorry. Okay. Sorry. My fault. So in the lavatory, if they're actually there, they should actually I would say wash hands and then basically try and make sure that you don't come in contact with bodily fluids of another person for sure and then basically follow universal precautions in terms of washing hands and using or alcohol based solutions that might be available so that would be my suggestion.

(Aaron Emmitt): Thank you.

Leeanna Allen: Thank you. Our next question from email comes and the question is, if an organization learns of a potentially impacted employee at work, who should they call or notify?

Dr. Kashef Ijaz: Yes. Thanks for that email question. So one of the things which is very important and we are actually very fortunate to have in the United States, are state and local health department and our partners at the state and local health department, we stand ready to actually assist with this response. So the local health department would be the lead in coordinating this response. So if an organization learns of a potentially impacted employee, they should actually get in touch with the local health department and then the local health department can also work with the state health department and the CDC to support these response activities.

Leeanna Allen: We will go to our next question on the phone.

Coordinator: Thank you and that comes from (Glenn Green) with Amtrak. You may ask your question.

(Glenn Green): Yes. In view of the updated guidance on personal protective equipment that was issued on the 20th with respect to healthcare workers, are there any plans to update further the Ebola guidance for airlines that was last updated on the 15th or to provide any more specific guidance for other transportation sectors such as railroads or buses?

Dr. Kashef Ijaz: So in terms of the personal protective equipment, there was new guidance generally provided just published this week. There are three key principles. All healthcare workers should undergo regular screening and are practiced and competent with the personal protective equipment including putting it on and taking it off in a systematic manner and no skin should be exposed with PPE is worn and all workers should be supervised by a trained monitor who watches each worker putting it on or taking it off. So that was the general guidance which is provided for PPE. In terms of any specific guidance for airlines or Amtrak, I think I'm not aware whether we are actually planning to update any of that which has already been published. I'll turn it over to Abbigail if she has anything else to add.

Abbigail Tumpey: Yes and just to add on the personal protective equipment guidance that was provided this week, that was really meant for healthcare workers who are treating patients with Ebola. We have guidance for other settings that we're working on right now and that will be forth coming.

(Glenn Green): Can you give us any clue as to what those settings are?

Abbigail Tumpey: Yes. We're looking at all healthcare settings and really looking at a variety of scenarios to make sure that thinking through where a potential patient with Ebola could walk into, and who they may come in contact with and those individuals who may need to have either educational resources or guidance on

what they should do as far as screening and triage and insuring that they're protected.

Leeanna Allen: Thank you for that question. Our next email question is, is there any guidance that people can use to help distinguish influenza virus symptoms from the Ebola virus especially as we're coming up on the beginning of flu season?

Dr. Kashef Ijaz: Yes. Thanks for that email question. So CDC actually has a new fact sheet which is available online and it is called Could It Be Ebola? There is a link which is a long link which I think we should be able to provide to the general audience who were invited to be on the call but it's actually available on our website as well. So the title of that particular link is Could It Be Ebola? (<http://www.cdc.gov/vhf/ebola/pdf/could-it-be-ebola.pdf>). The healthcare workers should think Ebola if the patient has a travel history to Liberia, Guinea or Sierra Leone and/or has a history of exposure to a person with Ebola.

Leeanna Allen: Thank you. We'll go to our next question on the phone.

Coordinator: Thank you and that comes from (Jackie Petrow) with (AFMI) Incorporated. You may ask your question.

(Jackie Petrow): My question was somewhere to the one with sneezing. I mean, if you're next to someone who's infected, those spores would be in the air that you would be breathing in. Is that not that considered a way to get this?

Dr. Kashef Ijaz: So if I understand it correctly, your question is whether Ebola can be transmitted if airborne. Unlike a respiratory illness like measles or chicken pox which can be transmitted by virus particles that remain suspended in the air after an infected person coughs or sneezes, Ebola is transmitted by direct

contact with body fluids of a person who has symptoms of Ebola disease. All the coughing or sneezing are not common symptoms of Ebola. If a symptomatic person with Ebola coughs or sneezes on someone and the saliva or mucous come into contact with that persons eyes, nose, mouth, these fluids may transmit the disease but generally speaking, it is not airborne.

(Jackie Petrow): Thank you.

Leeanna Allen: Thank you. Our next question over email is: is there any risk to service technicians or other professionals who may be entering consumers' homes to repair appliances or perform emergency home services if that home contains anyone who is quarantined?

Dr. Kashef Ijaz: Thanks for that question. It's an interesting question but an important one. CDC recommends that a distance of about three feet is observed for anyone that is quarantined and not showing symptoms.

Leeanna Allen: Thank you. We're ready for the next question on the phone.

Coordinator: Thank you and that comes from (Jim Sharp) with (Agis) Emergency Management. You may ask your question.

(Jim Sharp): Thanks very much. I'm just wondering if anybody can give some insight into how two of the nurses who treated the original patient, Mr. Duncan, became infected while his family members who had assumable much longer, much more personal direct contact with him did not? I mean, the nurses, even though they obviously weren't equipped in the required PPE as it certainly stands now, they were obviously wearing the standard medical PPE that you would find in an emergency room. That doesn't seem to match in my mind. I'm just wondering if anybody has looked into that.

Dr. Kashef Ijaz: Yes. Thanks for the question and that's a good question and I'm sure it's on the minds of a lot of other people. One has to realize that like I said at the very beginning that a person can be infectious or very infectious when they are symptomatic. So when they might be just starting to have symptoms, they might not be that infectious at that particular point in time because their viral load is going to be very, very low although it's not zero but they're going to be very much more infectious when they have actually full blown symptoms of Ebola and they're coughing or vomiting or have active diarrhea.

So at that particular point in time, the likelihood of transmission goes up. So there could be different hypotheses and maybe in the initial phase the person was not actually having full blow symptoms and the viral load was low and that could be possible that that's why the immediate contacts might not have actually got infected and then later on when the person presented at the hospital and was actually vomiting and having profuse diarrhea and full blow symptoms, I mean, that was certainly a much more higher viral load and that could have actually played a major role into that.

(Jim Sharp): The way, I guess, to break it down for somebody who's quite obviously not a doctor, the more sick somebody appears, the higher their viral load and the more likely they are to be contagious.

Dr. Kashef Ijaz: Yes. In general, that is the principle. That is correct. Obviously there are - in general, you have to understand that there are always host factors and agent factors which differ for different people. I mean, based on their immune responses and so on.

(Jim Sharp): I understand. Thank you doctor.

Leeanna Allen: Thank you. Our next email question is: should businesses be limiting or restricting domestic or international travel?

Dr. Kashef Ijaz: Yes. Thanks for that question. CDC urges all US residents to avoid non-essential travel to Liberia, Guinea, and Sierra Leone because of the unprecedented outbreak of Ebola in these countries. We recommend that travelers who are going to be traveling to these countries protect themselves by avoiding contact with blood and bodily fluids of people who are sick with Ebola and CDC, as I just mentioned, has recently updated its movement and monitoring guidelines for a person exposed to the Ebola virus and they are actually available online.

Leeanna Allen: Thank you. We'll go to our next question on the phone.

Coordinator: Thank you and that comes from Dr. (Herb Sone) with Strauss Surgical Group, Institute of Medicine. You may ask your question.

(Herb Sone): Hi. The question that I have is I'm an attending physician at a major hospital in Chicago. My two questions is this, has the CDC sent their protocols to all the major hospitals in the major cities of how to handle Ebola patients and secondly, there's a lot of equipment attached to the care of these individuals. Have they got enough equipment to supply the hospitals in the major cities?

I know you have certain hospitals you're sending Ebola patients to but we have emergency rooms where we may have contact with Ebola patients. I'm just wondering whether there's enough equipment available so if I talk to my hospital that they know where to get it and time that it would take to get the equipment. Thank you.

Abigail Tumpey: Yes. This is Abigail Tumpey. That's a great question. So the first part of your question with regards to training and education to healthcare workers. So we actually first started releasing guidance to healthcare facilities on August 1 and that was actually in conjunction with the first patient being medically evacuated to Emory University Hospital. We've done numerous webinars and educational opportunities. For example, just this week we had a large event in New York City that had over 5000 front line healthcare workers in person and it was streamed live to tens of thousands of people, healthcare workers, through various other sites like Medscape and Modern Healthcare, et cetera.

So we're continuing to do a variety of webinars, educational resources, working with partners like hospital associations and clinical groups and then also, we'll be continuing to do live events across the country as we make sure that every front line healthcare provider has the education that they need to ensure that they're able to safely manage one of these patients.

With regards to your second question with regards to is there enough equipment, I think the big issue is personal protective equipment. So we have released new guidance on personal protective equipment this week. I know that healthcare facilities will be looking for that equipment and ensuring that they have enough staff who are appropriately able to safely put on and take off that equipment. It can be very tricky and with regards to the supply, we're looking into that and continue to monitor to make sure that we do have enough supply for US healthcare facilities.

Leeanna Allen: Thank you Abigail. Our next question over email is: why is respiratory isolation and full respiratory protection required for Ebola if it is not possible to spread to through the air?

Dr. Kashef Ijaz: Yes. Thanks for that email question. The CDC guidance recommends respiratory protection to ensure safety of healthcare workers that may need to perform an unexpected aerosol generating procedure. Ebola is not airborne but if an urgent situation arises, healthcare workers should be ready and that's why wearing the personal protective equipment is essential.

Leeanna Allen: Thank you. We'll go to our next question on the phone.

Coordinator: That comes from (Scott Bertolis) with Willis. You may ask your question. (Scott), your line is open. Please check your mute feature.

(Scott Bertolis): I believe the question I was asking is actually was already answered. It was in regard to how long it lived outside the body.

Coordinator: Would you like to take another question from the phone lines then?

Leeanna Allen: Yes.

Coordinator: Thank you. Again, press Star 2 if you want to remove yourself from the queue. Our next question comes from (Barry Axel) with BioPlanet International, LLC. You may ask your question.

(Michelle): Hello. This is (Michelle) with BioPlanet. We specialize in the eradication of Norovirus today. How can we submit evidence to the CDC to show that electrostatic spray technology can achieve 100% of disinfection deposition compared to the hand, comp and mist sprayers being used today?

Abbgail Tumpey: Yes. This is Abbgail Tumpey from CDC and so as you know, there's really no disinfectant that has Ebola claims on the label. That's really an EPA issue so it'd be best to speak with them on that.

(Michelle): No. It's not about the product. It's not the chemical. It's the delivery system of the chosen chemical. Electrostatic spray technology induction charging to dispense 100% coverage because it takes and wraps around objects and targets that video and test evidence to show the superiority compared to the simple hand or pump trigger sprayers that are being used on the ground right now.

Abigail Tumpey: Thank you for the information on that. We're not familiar with this delivery system. I think it would be helpful for to reach out to EPA colleagues and discuss this in further detail with them.

(Michelle): Thank you but I'm sorry. It doesn't have to do with the EPA. It's about the CDC and a testing protocol for a delivery system.

Leeanna Allen: You can send information to [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov) or you can call 1-800-CDC-INFO and we'll get you routed to the appropriate subject matter expert.

(Michelle): Excellent. I appreciate the time. Thank you.

Leeanna Allen: We'll go to our next question via email. What is the appropriate level of PPE that providers should wear in an occupational health clinic setting?

Dr. Kashef Ijaz: Yes. Thanks for the question. As I just mentioned before - Abigail, do you want to take it?

Abigail Tumpey: Yes. So we're actually - this is Abigail Tumpey. As we mentioned the PPE guidance for healthcare workers who may be treating patients with Ebola was released late Monday but with regards to occupational health settings, we are working on additional guidance for these and other settings where patients with Ebola may present and those will be forthcoming.

Leeanna Allen: Thank you Abbigail. We'll go to our next question on the phone.

Coordinator: Thank you and that comes from (Dianna Million) with Primary Care Associates. Go ahead with your question. Please check your mute feature. There is no response from (Dianna). We'll go ahead with the next question that comes from (Steven Battle) with SC Department of Health and Environmental Control. Go ahead with your question.

(Steven Battle): Yes. Hi. This is Dr. (Steven Battle) from Columbia, South Carolina and Department of Health. We're getting a lot of questions from employers and employees regarding people who return from West Africa perhaps from the countries involved and they are questioning whether or not there's any employer or employee or occupational restrictions when they return. Is there any guidance regarding occupational restrictions?

Dr. Kashef Ijaz: If they're not symptomatic, they can continue to work. However, like I said, if they're actually coming -- as is outlined from our recent CDC guidance on movement and monitoring -- if they're actually returning from any of the countries which are - they're actually returning from Liberia, Sierra Leone or Guinea, they will be active in monitoring which means that the travelers that are febrile or symptoms consist with Ebola will be followed daily by their local and state health department for 21 days from the date of their departure from West Africa.

And as I mentioned before, this would basically entail taking temperatures and reporting them morning as well as in the afternoon and then also monitoring for presence or absence of Ebola symptoms such as headache, joint, muscle pains, weakness, diarrhea, vomiting, stomach ache or abnormal bleeding and

if they're actually intending to travel even within state or out of state, they should actually let the local and state health department know.

In the event that they do not, then the state and local health department will take measures and then these travels will be, as I mentioned before, will be receiving a check in report Ebola kit which will actually have a list of the signs and symptoms and how to monitor themselves and to monitor and stuff.

I mean, it's very similar to some of our CDC staff and colleagues who actually are returning from these Ebola infected countries. I mean, they are meant to be monitored. However, they are going to return back to work and continue with their regular duties but in case if they start having any signs and symptoms or running temperatures, then they would be actually cared for by the state and local health department.

(Steven Battle): So no restriction - I'm sorry but just a follow-up. No restrictions involving being around and working with immuno-compromised individuals, small children, older people, that kind of thing?

Dr. Kashef Ijaz: Well, if they do not actually have any signs and symptoms and if they are not running a temperature, then they should be able to carry on with their work. However, if they are not - it's always better to take the usual precautions and if they actually even start to develop any of the signs and symptoms or temperature then they should definitely isolate themselves.

(Steven Battle): Thank you.

Leeanna Allen: Thank you. Our next question that came to us via email is: there seems to be an antidote that worked well for the first two Americans who were repatriated to the United States but since then, we've not seen a lot in the news as to what

happened to the therapies. Is it being continued and can you talk a little bit about experimental treatments that may be available?

Dr. Kashef Ijaz: Yes. Thank you very much. So if the question is referring to ZMapp. I mean ZMapp is still in an experimental stage and the manufacturer has reported that there is very limited supply so it cannot be purchased and is not available for general use. The manufacturer has been planning a phase one clinical trial and does not have the capacity to manufacture large quantities of this treatment. The drug has not gone through clinical trials meaning its safety and effectiveness has not yet been tested in humans. The manufacturer of the experimental treatment continues to research and evaluated the safety and effectiveness of this drug.

The most effective way to stop Ebola is to be meticulous in managing cases, Ebola cases where they're originating and caring for those patients and tracing contacts to stop the chains of transmission. It means that educating people about safety burial practices and having healthcare workers strictly follow infection control in hospitals is essential and critical. This is how all of the previous Ebola outbreaks have been stopped in the past.

Leeanna Allen: Thank you. We'll go to our next question on the phone.

Coordinator: Thank you and that comes from (Kathy West) with IBM. Go ahead with your question.

(Kathy West): Hi. My question goes to the occupational health setting, people in our clinics as well as lay persons, first responders and the need to prepare them with adequate personal protective equipment and will you be providing video or any type of instructions on donning and doffing PPE that we can use in those situations?

Abigail Tumpey: Yes. This is Abigail Tumpey. Great question. So as we mentioned, the guidance for in-patient settings was released this week. We have the live training video that we did on Tuesday in New York City that's already available online and then we're creating a more in depth video for that as well. The guidance for other settings is forthcoming and we'll plan to do the same thing with those settings as well, having videos that explain donning and doffing safely, and various education materials like posters, et cetera.

(Kathy West): Perfect. Thank you.

Leeanna Allen: Thank you and I believe we have time for one more question from the phone.

Coordinator: Thank you. Our next question from the phone line then comes from (Casey Growl) with Ohio Mutual Insurance Company. Go ahead with our question.

(Casey Growl): Yes. My question is just a general question regarding advice you can give to private sector employers to ease concern of their employees and what kind of guidance we should offer in regards to traveling domestically. I know you mentioned traveling internationally but is there something we should be communicating to our employees about domestic travel?

Dr. Kashef Ijaz: No. In terms of domestic travel, there aren't any specific guidance for that other than the fact which I just mentioned before is the likelihood of airline travelers getting infected with Ebola virus is extremely unlikely and there is minimal risk to the passengers. It can only happen if there's an Ebola infected person who was very sick with fever and if the person comes into contact with the blood or the bodily fluids of that person but other than that, the likelihood of that actually happening is pretty low and as I mentioned a moment ago, on the day of illness when the person develops fever, the level of virus in the

body is pretty low although it's not zero but at the same point in time, as they get more and more sick and the symptoms become more intense because the viral load increases and their blood and bodily fluids might actually have been much more infectious at that particular point in time but in generally speaking, I think there's a lot of concern in the public about Ebola but the likelihood of getting people infected on airlines and flights is very, very low.

(Casey Growl): Thank you.

Leeanna Allen: Thank you Dr. Ijaz. It's probably a good idea for us all to be mindful of good, healthy hygiene and good hand washing habits. I'd like to say a special thank you to all of our speakers for sharing this valuable and timely information and before we go, Jed, do you have anything to add in closing?

Jed Meline: No but thank you for having me on the call today. Appreciate it very much.

Leeanna Allen: Thank you and thank you to all of our participants for joining us today. We completely maxed out our conference line capabilities. So we will be looking at scheduling some additional calls for the private sector. It's something that obviously is needed and we will be sending a summary of this call to participants as soon as it is available. So we ask that you please share that widely with your colleagues who may not have been able to join us today.

For those of you who submitted questions via email that we were unable to get to, we have already routed those questions to the appropriate subject matter experts for response and if you have additional questions, you can email them to [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov) or give us a call, 1-800-CDC-INFO. Due to the high volume of inquiries, there may be a delay in response so we appreciate your patience and understanding and don't forget, there's a lot of information on our website and that's [www.cdc.gov/ebola](http://www.cdc.gov/ebola). Thanks again for your interest and

engagement in this important topic. Operator, this concludes our call for today.

Coordinator: Thank you and this does conclude today's conference. We thank you for your participation. At this time, you may disconnect your lines.

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