

**Key Points – Ebola Virus Disease, West Africa**  
**Updated August 27, 2014**

*Newly updated information is indicated in red*

**\*\*For Missouri providers; Questions can be directed to DHSS' Bureau of Communicable Disease Control and prevention at 573/751-6113, or 800/392-0272 (24/7).\*\***

*The Centers for Disease Control and Prevention (CDC) is working with other U.S. government agencies, the World Health Organization, and other domestic and international partners in an international response to the current Ebola outbreak in West Africa. This document summarizes key messages about the outbreak and the response. It will be updated as new information becomes available and distributed regularly. Please share the document with others as appropriate.*

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**Summary Key Messages**

- *The 2014 Ebola outbreak is the largest Ebola outbreak in history and the first in West Africa. The current outbreak is affecting four countries in West Africa: Guinea, Liberia, Nigeria, and Sierra Leone but does not pose a significant risk to the United States. A small number of cases in Nigeria have been associated with a man from Liberia who traveled to Lagos and died from Ebola, but the virus does not appear to have been widely spread.*
- *In the past week, the Democratic Republic of Congo has reported cases of Ebola in a remote*

area of the country. These cases do not appear to be epidemiologically linked to the outbreak of Ebola in West Africa, based on preliminary investigation.

- The outbreak in West Africa is worsening, but CDC, along with other U.S. government agencies and international partners, is taking steps to respond to this rapidly changing situation.
- Ebola poses no substantial risk to the U.S. general population.
- On August 8, the World Health Organization (WHO) declared that the current Ebola outbreak is a Public Health Emergency of International Concern (PHEIC).
  - The PHEIC declaration underscores the need for a coordinated international response to contain the spread of Ebola.
  - Information about the PHEIC declaration is available on the WHO website [www.who.int/mediacentre/news/statements/2014/ebola-20140808/en/#](http://www.who.int/mediacentre/news/statements/2014/ebola-20140808/en/#).
- A person infected with Ebola virus is not contagious until symptoms appear.
- Ebola virus is spread through direct contact with the blood or body fluids (including but not limited to feces, saliva, urine, vomit, and semen) of a person who is sick with Ebola. The virus in the blood and body fluids can enter another person's body through broken skin or via unprotected mucous membranes in, for example, the eyes, nose, or mouth. The virus also can be spread through contact with objects (like needles and syringes) that have been contaminated with the virus, or infected animals.
  - Ebola is **not** spread through the air or by water or, in general, by food; however, in Africa, Ebola may be spread as a result of handling bushmeat (wild animals hunted for food) and contact with infected bats.
- As of **August 27**, no confirmed Ebola cases have been reported in the United States.
  - In 2014, two U.S. healthcare workers who were infected with Ebola virus in Liberia were transported to a hospital in the United States. Both patients have been released from the hospital after laboratory testing confirmed that they no longer have Ebola virus in their blood. CDC has advised the hospital that there is no public health concern with their release and that they do not pose a risk to household contacts or to the public.
  - CDC has received many calls from health departments and hospitals about suspected cases of Ebola in travelers from the affected countries. These calls have been triaged appropriately and some samples have been sent to CDC for testing. All samples sent to CDC have so far been negative.
  - Samples from other U.S. persons under investigation (all of whom recently traveled to West Africa) are being tested as they are received. To date, all persons under investigation in the United States have tested negative for Ebola.
- As a precaution, CDC is communicating with American healthcare workers about how to detect and isolate patients who may have Ebola and how they can protect themselves from infection.
- Early recognition of Ebola is important for providing appropriate patient care and preventing the spread of infection. Healthcare providers should be alert for and evaluate any patients who may have Ebola.
  - The case definitions for Ebola virus disease are available at [www.cdc.gov/vhf/ebola/hcp/case-definition.html](http://www.cdc.gov/vhf/ebola/hcp/case-definition.html).
- CDC and its partners at U.S. ports of entry are following standard procedures and monitoring arriving travelers but currently are not doing enhanced entry screening of passengers traveling from the affected countries. However, CDC works with international public health organizations, other federal agencies, and the travel industry to identify sick travelers arriving in the United States and take public health actions to prevent the spread of communicable diseases.

- CDC also is assisting with exit screening and communication efforts in West Africa to prevent sick travelers from getting on planes.
- CDC recommends that people avoid nonessential travel to Guinea, Liberia, and Sierra Leone.
- CDC recommends that people practice enhanced precautions if traveling to Nigeria.
- Recommendations and guidance may change as new information becomes available.

### **Ebola Cases and Deaths (West Africa)**

- As of August 20, 2014, a total of 2615 suspected and confirmed cases of Ebola and 1427 deaths have been reported.
  - Guinea reported 607 cases, including 406 fatalities
  - Liberia reported 1,082 cases, including 624 fatalities
  - Nigeria reported 16 cases, including 5 fatalities
  - Sierra Leone reported 910 cases, including 392 fatalities
    - On July 25, the Nigerian Ministry of Health confirmed that a man in Lagos died from Ebola infection. The man had been in a hospital since arriving at the Lagos airport from Liberia. A small cluster of cases in Nigeria has been reported associated with this case, but the virus does not appear to have been widely spread.
- The death rate in some Ebola outbreaks has been as high as 90% (9 in 10). In this outbreak it is currently averaging around 55%-60% (1 in 2). The death rates have varied in different areas , which may be because of the availability of medical care.
- For specific areas where cases have been identified, see CDC's [Ebola outbreak webpage](http://www.cdc.gov/vhf/ebola/outbreaks/guinea/index.html) (<http://www.cdc.gov/vhf/ebola/outbreaks/guinea/index.html>).

### **Ebola in U.S. Healthcare Workers (in Liberia)**

- Two U.S. citizens working at a hospital in Monrovia, Liberia, were confirmed to have Ebola virus infection in late July.
  - Both patients were safely transported to a hospital in the United States.
  - **Both patients were released from the hospital after laboratory testing confirmed that they no longer have Ebola virus in their blood. CDC advised the hospital that the two former patients do not pose a risk to household contacts or the public.**

### **Background on Ebola**

- Ebola, previously known as Ebola hemorrhagic fever, is a rare and deadly disease caused by infection with one of the Ebola virus strains (Zaire, Sudan, Bundibugyo, or Tai Forest virus).
- Ebola viruses are found in several African countries. The first Ebola virus was discovered in 1976 near the Ebola River in what is now the Democratic Republic of the Congo. Since then, outbreaks have appeared sporadically in Africa.
- Based on evidence and the nature of other similar viruses, researchers believe that Ebola virus is animal-borne and that bats are the most likely reservoir.
- Ebola virus is spread through direct contact with the blood or body fluids (including but not limited to feces, saliva, urine, vomit, and semen) of a person who is sick with Ebola. The virus in the blood and body fluids can enter another person's body through broken skin or via

unprotected mucous membranes in, for example, the eyes, nose, or mouth. The virus also can be spread through contact with objects (like needles and syringes) that have been contaminated with the virus, or infected animals.

- Ebola is **not** spread through the air or by water or, in general, by food; however, in Africa, Ebola may be spread as a result of handling bushmeat (wild animals hunted for food) and contact with infected bats.
- The incubation period, from exposure to when signs or symptoms appear, is 2 to 21 days but the average is 8 to 10 days.
- Genetic analysis of the virus in the current outbreak indicates it is closely related to variants of Ebola virus (species *Zaire ebolavirus*) identified earlier in the Democratic Republic of the Congo and Gabon.

## Symptoms

- Signs of Ebola include fever (greater than 38.6°C or 101.5°F) and additional symptoms, such as severe headache, muscle pain, vomiting, diarrhea, abdominal (stomach) pain, or unexplained hemorrhage (bleeding or bruising).

## Risk

- Healthcare providers caring for Ebola patients and the family and friends in close contact with Ebola patients are at the highest risk of getting sick because they may come in contact with the blood or body fluids of sick patients.
- People also can become sick with Ebola after coming in contact with infected wildlife. For example, in Africa, Ebola may be spread as a result of handling bushmeat (wild animals hunted for food) and contact with infected bats.

## Prevention

- There is no vaccine for Ebola.
- If you must travel to or are in an area affected by the Ebola outbreak, make sure to do the following:
  - Practice careful hygiene. Avoid contact with blood and body fluids.
  - Do not handle items that may have come in contact with an infected person's blood or body fluids.
  - Avoid funeral or burial rituals that require handling the body of someone who has died from Ebola.
  - Avoid contact with bats and nonhuman primates or blood, fluids, and raw meat prepared from these animals.
  - Avoid hospitals where Ebola patients are being treated. The U.S. Embassy or consulate is often able to provide advice on healthcare facilities.
  - Seek medical care immediately if you develop fever, headache, muscle pain, diarrhea, vomiting, stomach pain, or unexplained bruising or bleeding.
    - Limit your contact with other people when you go to the doctor. Do not travel anywhere else.
- **If you were exposed to Ebola during your trip, call your doctor even if you do not have symptoms.**

- Your doctor should evaluate your exposure level and any symptoms and consult with public health authorities to determine whether actions, such as medical evaluation and testing for Ebola, monitoring, or travel restrictions are needed.
- Even if not exposed to Ebola, travelers returning from Guinea, Liberia, Nigeria, and Sierra Leone are advised to take the following steps:
  - Monitor your health for 21 days.
    - During the time that you are monitoring your health, you can continue your normal activities, including work.
  - Seek medical care immediately if you develop fever and additional Ebola symptoms like severe headache, muscle pain, vomiting, diarrhea, stomach pain, or unexplained bleeding or bruising.
    - Tell the doctor about recent travel and symptoms before going to the office or emergency room. Advance notice will help the doctor provide care and protect other people who may be in the office.
  - If you get symptoms of Ebola, it is important to stay apart from other people and to call your doctor right away.

## Treatment

- No specific vaccine or medicine (e.g., antiviral drug) has been proven to be effective against Ebola.
- Symptoms of Ebola are treated as they appear. The following basic interventions, when used early, can significantly improve the chances of survival.
  - Providing intravenous fluids and balancing electrolytes (body salts)
  - Maintaining oxygen status and blood pressure
  - Treating other infections if they occur
- Experimental treatments have been tested and proven effective in animals but have not yet been tested in humans.
  - ZMapp, developed by Mapp Biopharmaceutical Inc., is an experimental treatment for use with persons infected with Ebola virus. The product is a combination of three different monoclonal antibodies that bind to the protein of Ebola virus.
  - It is too early to know if ZMapp is effective because the drug is still in an experimental stage and has not yet been tested in humans for safety or effectiveness. Some patients infected with Ebola virus do get better spontaneously or with supportive care.
    - The best way to know if treatment with the product is effective is to conduct a randomized controlled clinical trial in people to compare outcomes of patients who receive the treatment to patients who have not. No such studies have been conducted to date.

## Recovery

- Recovery from Ebola depends on the patient's immune response. People who recover from Ebola infection develop antibodies that last for at least 10 years, possibly longer.

## **CDC Recommendations and Guidance**

### **Healthcare workers in West Africa**

- Healthcare workers who may be exposed to people with Ebola should follow these steps:
  - Wear protective clothing, including masks, gloves, gowns, and eye protection.
  - Practice proper infection control and sterilization measures. For more information, see “Infection Control for Viral Hemorrhagic Fevers in the African Health Care Setting” ([www.cdc.gov/vhf/abroad/vhf-manual.html](http://www.cdc.gov/vhf/abroad/vhf-manual.html)).
  - Isolate patients with Ebola from other patients.
  - Avoid direct contact with the bodies of people who have died from Ebola.
  - Notify health officials if you have had direct contact with the blood or body fluids, such as but not limited to, feces, saliva, urine, vomit, and semen of a person who is sick with Ebola. The virus can enter the body through broken skin or unprotected mucous membranes in, for example, the eyes, nose, or mouth

### **Healthcare providers in the United States**

- CDC encourages all U.S. healthcare providers to
  - Ask patients about their travel histories to determine if they have traveled to West Africa within the last three weeks.
  - Know the signs and symptoms of Ebola – fever (greater than 38.6°C or 101.5°F) and additional symptoms, such as severe headache, muscle pain, vomiting, diarrhea, abdominal (stomach) pain, or unexplained hemorrhage (bleeding or bruising).
  - Know what to do if they have a patient with Ebola symptoms:
    - First, properly isolate the patient.
    - Then, follow infection control precautions to prevent the spread of Ebola. Avoid contact with blood and body fluids of infected people.
- CDC has posted a Medscape Expert Commentary for healthcare providers whose patients are travelers with concerns about Ebola.
  - The commentary includes information about the Ebola outbreak in West Africa, the transmission Ebola virus, and how to talk to travelers about their risk.
  - The video is available on the CDC website at <http://wwwnc.cdc.gov/travel/page/clinician-updates>
- U.S. healthcare workers should follow CDC’s “Infection Prevention and Control Recommendations for Hospitalized Patients with Known or Suspected Ebola Hemorrhagic Fever in U.S. Hospitals” ([www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html](http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html)).
  - CDC recommends standard, contact, and droplet precautions for management of hospitalized patients with known or suspected Ebola. These precautions can be found in “2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Setting” at [www.cdc.gov/hicpac/2007IP/2007ip\\_part3.html](http://www.cdc.gov/hicpac/2007IP/2007ip_part3.html).
- A CDC Health Alert Network (HAN) notice providing guidance to U.S. healthcare workers and hospitals regarding Ebola virus disease was distributed by CDC on August 1 (<http://emergency.cdc.gov/han/han00363.asp>).

## Infection control

- Any U.S. hospital that is following CDC's infection control recommendations and that can isolate a patient in their own room is capable of safely managing a patient with Ebola virus disease.
  - These patients need intensive supportive care.
  - Standard, contact, and droplet precautions are recommended.
- Early recognition
  - Early recognition is critical for infection control. Any patient with a suspected case of Ebola needs to be isolated until diagnosis is confirmed or Ebola is ruled out.
  - Healthcare providers should consider travel history, symptoms, and risks of exposure before recommending Ebola diagnosis.
- Patient placement
  - Patients should be placed in a single patient room (containing a private bathroom) with the door closed.
  - Facilities should maintain a log of all people entering the patient's room.
  - Use only a mattress and pillow with waterproof plastic or other waterproof covering. Do not place patients with suspected or confirmed Ebola virus infection in carpeted rooms and remove all upholstered furniture and decorative curtains from patient rooms before use.
- Protecting healthcare providers
  - All people entering the patient room should wear at least: gloves, gown (fluid resistant or waterproof), eye protection (goggles or face shield), and a facemask.
  - Additional personal protective equipment (PPE) might be required in certain situations (for example, large amounts of blood, other body fluids, vomit, or feces present in the environment), including but not limited to double gloving, disposable shoe covers, and leg coverings.
  - Healthcare providers should frequently perform hand hygiene before and after all patient contact, contact with potentially infectious material, and before putting on and upon removal of PPE, including gloves.
- Patient care equipment
  - Dedicated medical equipment (preferably disposable, when possible) should be used to provide patient care.
  - All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to the manufacturer's instructions and hospital policies.
- Patient care considerations
  - Limit the use of needles and other sharps as much as possible.
  - Phlebotomy, procedures, and laboratory testing should be limited to the minimum necessary for essential diagnostic evaluation and medical care.
  - All needles and sharps should be handled with extreme care and disposed in puncture-proof, sealed containers.
  - Avoid aerosol-generating procedures. If performing aerosol-generating procedures, use a combination of measures to reduce exposures from patients with Ebola virus disease. (See CDC's guidance for more details on how to perform aerosol generating procedures safely: [www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html](http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html).)
- Environmental infection control

- Daily cleaning and disinfection of hard, non-porous surfaces should be done using a U.S. Environmental Protection Agency (EPA)-registered hospital disinfectant with a label claim for a non-enveloped virus.
- Healthcare providers performing environmental cleaning and disinfection should wear recommended PPE (described above) and consider use of additional barriers (such as, shoe and leg coverings) if needed.
- Eye protection (face shield or goggles) and face mask should be worn when performing tasks, such as liquid waste disposal, that can generate splashes.
- Disposable materials (such as any single-use PPE, cleaning cloths, wipes, single-use microfiber cloths, linens, food service) and linens, privacy curtains, and other textiles after use in the patient room should be placed in leak-proof containment and discarded as regulated medical waste.
- Sanitary sewers may be used for the safe disposal of patient waste.
- For detailed information on environmental infection control, see CDC's "Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus" ([www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html](http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html)).
- Duration of precautions
  - The duration of precautions should be determined on a case-by-case basis, in conjunction with local, state, and federal health authorities.
- For more details on infection control in U.S. hospitals, see [www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html](http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html) and <http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>.

## Travelers

- CDC has issued a Warning, Level 3 travel notice for 3 countries. U.S. citizens should avoid all nonessential travel to Guinea, Liberia, and Sierra Leone.
- CDC has issued an Alert, Level 2 travel notice for Nigeria. Travelers to Nigeria should take enhanced precautions to prevent Ebola.
- If you travel to any of the four affected countries, make sure to do the following:
  - Visit CDC's Travelers' Health website ([wwwnc.cdc.gov/travel](http://wwwnc.cdc.gov/travel)) for more information about the outbreak and for other health recommendations to the specific countries.
  - Practice careful hygiene. Avoid contact with blood and body fluids.
  - Do not handle items that may have come in contact with an infected person's blood or body fluids.
  - Avoid funeral or burial rituals that require handling the body of someone who has died from Ebola.
  - Avoid contact with animals or raw meat.
  - Avoid hospitals where patients with Ebola are being treated. The U.S. Embassy or consulate is often able to provide advice on facilities.
  - Seek medical care immediately if you develop fever, headache, muscle aches, diarrhea, vomiting, stomach pain, or unexplained bruising or bleeding.
    - Limit your contact with other people when you go to the doctor. Do not travel anywhere else.
- Travelers returning from Guinea, Liberia, Nigeria, and Sierra Leone are advised to call their doctor if they were exposed to Ebola during their trip even if they do not have symptoms.



- Your doctor should evaluate your exposure level and any symptoms and consult with public health authorities to determine whether actions, such as medical evaluation and testing for Ebola, monitoring, or travel restrictions are needed.
- Even if not exposed to Ebola, travelers returning from Guinea, Liberia, Nigeria, and Sierra Leone are advised to take the following steps:
  - Monitor your health for 21 days.
    - During the time that you are monitoring your health, you can continue your normal activities, including work.
  - Seek medical care immediately if you develop fever and additional Ebola symptoms like severe headache, muscle pain, vomiting, diarrhea, stomach pain, or unexplained bleeding or bruising.
    - Tell the doctor about your recent travel and symptoms before going to the office or emergency room. Advance notice will help the doctor provide care and protect other people who may be in the office.
  - If you get symptoms of Ebola, it is important to stay apart from other people and to call your doctor right away.

## Humanitarian aid workers

- CDC has developed recommendations for humanitarian aid workers traveling to Guinea, Liberia, Nigeria, and Sierra Leone during the Ebola outbreaks in these countries.
- The recommendations include steps to take before departure, during travel, and upon return to the United States.
  - Before traveling, CDC advises that humanitarian aid workers visit with a travel medicine provider, pack needed medical supplies and first aid items, verify whether their health insurance plan will provide appropriate coverage, identify travel restrictions that may affect their travel, register with the U.S. embassy and locate places where they can get health care in their destination country.
  - During travel, CDC recommends that aid workers practice careful hygiene, avoid contact with blood, body fluids, and bodies of people who have died from Ebola, avoid contact with animals, raw or undercooked meat, and bushmeat, avoid hospitals in Ebola-affected countries where Ebola patients are being treated.
    - If possibly exposed to Ebola during travel, aid workers should notify their organization and the U.S. embassy or consulate in their destination.
  - After returning to the U.S., aid workers are encouraged to monitor their health for 21 days following travel and seek medical care immediately if they develop symptoms of Ebola infection.
    - Aid workers who may have been exposed to Ebola during their trip are advised to call their doctor even if they do not have symptoms.
- The guidance also notes special precautions for humanitarian aid workers working in health care settings.
  - Aid workers working in health care settings should follow additional precautions, including but not limited to wearing the right personal protective equipment, using proper prevention and control measures, learning the signs and symptoms of Ebola to

properly identify and triage patients, and avoiding direct, unprotected contact with bodies of people have died from Ebola.

- The full text of the guidance can be found on CDC's website at <http://wwwnc.cdc.gov/travel/page/humanitarian-workers-ebola>.

### **Airline flight crews, cleaning personnel, and cargo personnel**

- CDC's Interim Guidance about Ebola Virus Infection for Airline Flight Crews, Cleaning Personnel, and Cargo Personnel is posted on CDC's website at [www.cdc.gov/quarantine/air/managing-sick-travelers/ebola-guidance-airlines.html](http://www.cdc.gov/quarantine/air/managing-sick-travelers/ebola-guidance-airlines.html).

### **Monitoring and movement of people with Ebola**

- CDC developed interim guidance to provide public health authorities and other partners with a framework for evaluating people's level of exposure to Ebola and initiating appropriate public health actions on the basis of exposure level and clinical assessment.
  - The full text of CDC's Interim Guidance for Monitoring and Movement of Persons with Ebola Virus Disease Exposure is available on CDC's website at [www.cdc.gov/vhf/ebola/hcp/monitoring-and-movement-of-persons-with-exposure.html](http://www.cdc.gov/vhf/ebola/hcp/monitoring-and-movement-of-persons-with-exposure.html).
- These recommendations were issued to reduce the risk of Ebola spreading to other passengers or crew and to ensure that people infected with Ebola are able to quickly access appropriate medical care.
- The guidance balances the public health risk to others, the rights of individuals, and the impact of the recommendations on the welfare of the Ebola-affected countries and is based on the least restrictive means necessary to protect the public's health.
- CDC's recommendations for travel restrictions apply to people with certain levels of Ebola exposure. Establishing a person's level of exposure will help determine how much monitoring is needed and if it is safe for the person to travel by commercial conveyance.
  - Ebola exposure levels are classified as high risk, some risk, or no known exposure.
- For people with certain levels of exposure who are sick with fever or other symptoms of Ebola, specific public health actions may be needed.
  - These can include medical evaluation with infection control precautions and only allowing air medical transport if air travel is needed.
- The guidance also details restrictions for people with certain levels of exposure even if they do not have fever or other symptoms of Ebola. Although people without symptoms are not infectious, CDC recommends certain precautions because of the possibility that symptoms could develop during travel, particularly during long international flights.

### **Laboratories**

- CDC recommends that healthcare workers contact their state and/or local health department and CDC to determine the proper category for shipment based on clinical history and risk assessment by CDC.
  - State guidelines may differ and state or local health departments should be consulted before shipping.
  - For updated guidance on specimen submission, see [www.cdc.gov/ncezid/dhcpp/vspb/specimens.html](http://www.cdc.gov/ncezid/dhcpp/vspb/specimens.html)

- CDC has developed interim guidance for laboratorians and other healthcare personnel who collect or handle specimens in the United States on the appropriate steps for collecting, transporting, and testing specimens from patients who are suspected to be infected with Ebola virus. The guidance is available on CDC's website [www.cdc.gov/vhf/ebola/hcp/interim-guidance-specimen-collection-submission-patients-suspected-infection-ebola.html](http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-specimen-collection-submission-patients-suspected-infection-ebola.html).
- Ebola virus is detected in blood only after onset of symptoms, most notably fever.
  - It may take up to 3 days post-onset of symptoms for the virus to reach detectable levels.
  - Virus is generally detectable by real-time RT-PCR between 3 to 10 days post-onset of symptoms, but has been detected for several months in certain secretions (e.g., semen).
  - Specimens ideally should be taken when a symptomatic patient seeks care and is suspected of having an been exposed to Ebola; however, if the onset of symptoms is less than 3 days, a subsequent specimen will be required to completely rule out Ebola.

## **What CDC is Doing**

- CDC has activated its Emergency Operations Center (EOC) to help coordinate technical assistance and control activities with partners.
  - On August 6, CDC elevated the EOC to a Level 1 activation, its highest level, because of the significance of the outbreak.
  - CDC is in regular communication with other U.S. government agencies that are participating in the response, the ministries of health of the affected countries, the World Health Organization (WHO), and other international partners.
- Since July 9, 2014, approximately 500 CDC staff members have provided logistics, staffing, communication, analytics, management, and other support functions. CDC has deployed several teams of public health experts to the West Africa region. As of **August 27**, more than **70 CDC staff** deployed to Guinea, Liberia, Nigeria, and Sierra Leone are assisting with various response efforts, including surveillance, contact tracing, database management, and health education.
  - CDC continues to send additional public health experts to the affected countries.
  - CDC staff are assisting with setting up an emergency response structure, contact tracing, providing advice on exit screening and infection control at major airports, and providing training and education in the affected countries.
  - As of August 22, eight health communicators are deployed to Guinea, Liberia, and Sierra Leone.
    - **CDC health communicators and public health advisors in Sierra Leone, Guinea, and Liberia are working closely with country embassies, UNICEF, WHO, and ministries of health to develop public health messages and implement social mobilization activities.**
    - **In all three countries, CDC health communicators are meeting with local community leaders beyond capital cities.**
    - **In Liberia, CDC is contributing messaging and supporting the Carter Center's trainings for leaders in 15 counties to improve Ebola response activities.**
    - **Africell (a telecommunications company in Sierra Leone with 2.6 million subscribers) is broadcasting daily 30-minute radio programs, weekly hour-long TV segments, and sending text messages on Ebola with the support of CDC, the U.S. Embassy, and the non-governmental organization, BBC Media Action.**

- CDC's Ebola radio spots for West African communities are played throughout the day by UNICEF, the U.S. Embassy, and other distribution outlets for public dissemination on radio and megaphones in churches, trucks, and public buildings in Freetown and Kenema, Sierra Leone.
- Communicators are developing training and messaging for communities with low literacy skills on transmission, safe burial practices, and psycho-social support.
- In Kenema, Sierra Leone, CDC and the international non-governmental organization GOAL conducted a 2-day training session for police and security personnel on Ebola risk mitigation and response activities with future sessions planned in the region.
- CDC is working closely with U.S. Agency for International Development (USAID), Office of Foreign Disaster Assistance (OFDA), to support the deployment to Liberia of a Disaster Assistance Response Team (DART), which is overseeing the U.S. government's Ebola response in West Africa.
  - CDC, in partnership with the Global Outbreak Alert and Response Network and the U.S. National Institutes of Health, provided a field laboratory to Liberia to increase the number of specimens being tested for Ebola. The partners then worked together to set up the laboratory at the ELWA campus in Monrovia. **As of August 22, the lab is operating at full capacity. In addition to providing much-needed testing support, the field lab is only the second site in Liberia capable of testing specimens from patients with suspected Ebola.**
- **CDC is working with airlines to address crew and airline staff concerns while ensuring the ability of humanitarian and public health organizations to transport assistance into the affected countries.**
- CDC is also working with airlines, airports, and ministries of health to provide technical assistance for developing exit screening and travel restrictions in the affected areas. This includes:
  - Assessing the capacity of Ebola-affected countries and airports to conduct exit screening
  - Assisting with development of exit screening protocols
  - Training staff on exit screening protocols and appropriate PPE use
  - Training in-country staff to provide future trainings
- CDC has issued a Warning, Level 3 notice for U.S. citizens to avoid nonessential travel to the West African nations of Guinea (<http://wwwnc.cdc.gov/travel/notices/warning/ebola-guinea>), Liberia (<http://wwwnc.cdc.gov/travel/notices/warning/ebola-liberia>), and Sierra Leone (<http://wwwnc.cdc.gov/travel/notices/warning/ebola-sierra-leone>). CDC also has issued an Alert, Level 2 travel notice to advise about enhanced precautions for people traveling to Nigeria (<http://wwwnc.cdc.gov/travel/notices/alert/ebola-nigeria>).
  - At this time, CDC is not doing enhanced screening of arriving travelers because standard procedures are already in place for monitoring arriving travelers for illness at U.S. airports, seaports, or land borders.
  - CDC is working closely with Customs and Border Protection (CBP) and other partners at ports of entry (primarily international airports) to use routine processes to identify travelers who show signs of infectious disease. In response to the outbreak, these processes have been enhanced through guidance and training. CDC's quarantine station staff are asked to respond as needed, for example by evaluating ill travelers identified by CBP officers.

- If an ill traveler is identified during or after a flight, CDC will conduct an investigation of exposed travelers and work with the airline, federal partners, and state and local health departments to notify them and take any necessary public health action.
- CDC is assisting with exit screening and communication efforts in West Africa to prevent sick travelers from getting on planes.
- CDC has released interim guidance for airline flight crews, cleaning personnel, and cargo personnel that can be found at [www.cdc.gov/quarantine/air/managing-sick-travelers/ebola-guidance-airlines.html](http://www.cdc.gov/quarantine/air/managing-sick-travelers/ebola-guidance-airlines.html).
- CDC has provided interim guidance for monitoring and movement. This guidance is available on CDC's website at [www.cdc.gov/vhf/ebola/hcp/monitoring-and-movement-of-persons-with-exposure.html](http://www.cdc.gov/vhf/ebola/hcp/monitoring-and-movement-of-persons-with-exposure.html).
- CDC has developed and posted Ebola-specific travel messages for electronic monitors to reach travelers from West Africa and posters for TSA screening areas of airports to reach outbound travelers. Visit [wwwnc.cdc.gov/travel/page/infographics-travelers](http://wwwnc.cdc.gov/travel/page/infographics-travelers) to see the messages.
- CDC is actively working to educate American healthcare workers on how to isolate patients and how to protect themselves from infection.
  - On August 1, CDC sent out a Health Alert Network (HAN) advisory ([www.bt.cdc.gov/han/han00364.asp](http://www.bt.cdc.gov/han/han00364.asp)) informing U.S. healthcare workers of guidelines for evaluating U.S. patients suspected of having Ebola.
  - CDC has developed guidance for U.S. healthcare providers outlining how to prevent and control infections in hospitalized patients with known or suspected Ebola. This guidance can be found at [www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html](http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html).
  - On July 28, CDC sent out a HAN advisory (<http://emergency.cdc.gov/han/han00363.asp>) urging U.S. healthcare workers to be alert for signs and symptoms of Ebola in patients who have a recent travel history to countries where the outbreak is occurring.
- CDC continues to update its communication products and webpages with new information on the Ebola outbreak for the general public and specific audiences.
  - A Questions and Answers on Ebola document ([www.cdc.gov/vhf/ebola/outbreaks/guinea/qa.html](http://www.cdc.gov/vhf/ebola/outbreaks/guinea/qa.html)) is posted on CDC's Ebola website and will be updated regularly.
  - CDC is working with partners to display Ebola-specific travel messages for electronic monitors and posters at ports of entry to reach travelers from West Africa.
- CDC is using social media as a way to share credible, fact-based information and to dispel misconceptions about Ebola.
  - CDC Emergency participated in two Twitter chats organized and run by the Nigerian STOPEBOLA social media team. The first chat focused on general information and the second on stigmatization.
  - CDC hosted a Twitter chat about Ebola and the current outbreak on August 4. The chat was the largest chat in CDC history and provided the public an opportunity to have direct access to CDC's disease detectives. The potential reach of the chat was over 109 million.

- In late August, CDC returned a staff member from West Africa by charter flight after the employee had low-risk contact with an international health worker who recently tested positive for Ebola.
  - The CDC staff member worked in close proximity (within three feet) in the same room with the ill person for a prolonged period when that individual had symptoms.
  - The returning CDC staff person was rotating back to the United States, as scheduled, from their assignment in West Africa.
  - All CDC staff members, including persons returning by charter flight, are monitoring their health when they return from their work in the Ebola response. Monitoring means checking for fever twice daily and contacting their doctor or health care provider immediately if they develop fever or other symptoms).
  - The CDC staff person is not sick with Ebola, does not show symptoms of the disease, and therefore poses no Ebola-related risk to friends, family, co-workers, or the public.
  - The exposed staff person is not restricted to staying at home and could return to assigned work duties at CDC during the 21-day period of symptom monitoring.

## **CDC Foundation**

- The CDC Foundation is assisting CDC in the response to the Ebola outbreak in West Africa by providing critical assistance and supplies through donations to the Foundation's Global Disaster Response Fund, which enables CDC staff to respond quickly to changing circumstances and needs.
- Some immediate needs for CDC staff working with local in-country personnel include laptop computers for communication and disease tracking, personal protective equipment, thermal scanners and infection control training. In addition, isolation beds and Ebola treatment centers are in short supply. Another critical need is funding for emergency operations centers in the four countries impacted by the outbreak. There will be unanticipated needs as well in the response to this epidemic. Funds donated to the CDC Foundation can be deployed and put to work where needed with CDC and its partners.
- To date, the CDC Foundation has been providing supplies to support CDC's work in the countries impacted by the Ebola outbreak. These include requests for forehead thermometers, personal protective equipment, computers and face shields.
- Additional information will be provided as the response continues to evolve.
- More information on CDC Foundation's Global Disaster Response Fund is available at [www.cdcfoundation.org/globaldisaster](http://www.cdcfoundation.org/globaldisaster).

## **Stigma**

West Africans in the United States and elsewhere may face stigmatization (stigma) during the current Ebola outbreak because the outbreak is associated with a region of the world.

- Stigma involves stereotyping and discriminating against an identifiable group of people, a product, an animal, a place, or a nation.
  - Stigma can occur when people associate an infectious disease, such as Ebola, with a population, even though not everyone in that population or from that region is specifically at risk for the disease (for example, West Africans living in the United States).
  - Stigma occurred among Asian Americans in the United States during the SARS pandemic in 2003.
- Communicators and public health officials can help counter stigma during the Ebola response as follows.
  - Communicate early the risk or lack of risk from associations with products, people, and places.
  - Raise awareness of the potential problem.
  - Counter stigmatization with accurate risk information about how the virus spreads.
  - Speak out against negative behaviors.
  - Be cautious about the images that are shared. Make sure they do not reinforce stereotypes.
  - Model good behaviors; engage with stigmatized groups in person and through social media.

### **For More Information about Ebola**

- CDC will continue to post new information about the Ebola outbreak on the following websites as it becomes available:
  - CDC Ebola Hemorrhagic Fever site: [www.cdc.gov/ebola](http://www.cdc.gov/ebola)
  - CDC Travelers' Health site: <http://wwwnc.cdc.gov/travel/notices>
- World Health Organization (WHO) Ebola virus disease (EVD) site: [www.who.int/csr/disease/ebola/en/](http://www.who.int/csr/disease/ebola/en/)