

KEY MESSAGES – EBOLA VIRUS DISEASE, WEST AFRICA

Updated September 9, 2014

**Newly updated information is indicated in red*

The Centers for Disease Control and Prevention (CDC) is working with other U.S. government agencies, the World Health Organization (WHO), 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 this document with others as appropriate.

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SUMMARY KEY MESSAGES

- The 2014 Ebola outbreak is the largest in history and the first Ebola outbreak in West Africa. The current outbreak is affecting multiple countries in West Africa but does not pose a significant risk to the United States.
- The majority of cases overall have been reported in three countries: Guinea, Liberia, and Sierra Leone.
 - There are a small number of cases in Nigeria that have been linked to a man from Liberia who traveled to Lagos and died from Ebola.
- **In Senegal, one case has been confirmed. No deaths or further suspected cases have been reported. The case is in a man from Guinea who traveled by road to Senegal.**
- The Democratic Republic of the Congo (DRC) has reported cases of Ebola in a remote area of the country. However, WHO received test results showing the Ebola virus strain causing the outbreak in the DRC is different from the strain in the current outbreak in West Africa. These results confirm that the two outbreaks are unrelated.
 - **Information on the outbreak in DRC can be found at <http://wwwdev.cdc.gov/vhf/ebola/outbreaks/drc/2014-august.html>.**
- The outbreak in West Africa is worsening, and 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, 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/#.
- 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 with 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 **September 9** no confirmed Ebola cases have been reported in the United States.
- As a precaution, CDC is communicating with U.S. 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.
- 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 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 31, 2014**, a total of **3707** suspected and confirmed cases of Ebola and **1848** deaths have been reported.
 - Guinea reported **771** cases, including **494** fatalities
 - Liberia reported **1698** cases, including **871** fatalities
 - Nigeria reported **21** cases, including **7** 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.
 - **Senegal reported 1 case**
 - Sierra Leone reported **1216** cases, including **476** fatalities
- The death rate in some Ebola outbreaks has been as high as 90% (9 in 10). In this outbreak it is currently averaging around 50% (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. HEALTH WORKERS (IN WEST AFRICA)

- In 2014, two U.S. health 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.
- **In September 2014, a U.S. health worker serving on a medical mission in Liberia tested positive for Ebola and was transported to a hospital in Nebraska for medical care.**
- **In September 2014, a U.S. health worker with the World Health Organization in Sierra Leone tested positive for Ebola and was transported to a hospital in Georgia for medical care.**

- CDC has received many calls from health departments and hospitals about **persons under investigation**. 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.

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 with 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 time 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 that has been proven to be effective in preventing 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
- Some experimental treatments developed for Ebola have been tested and proven effective in animals but have not yet been tested in **randomized trials** in humans.
 - ZMapp, developed by Mapp Biopharmaceutical Inc., is an experimental treatment for use with individuals infected with Ebola virus. The product is a combination of three different monoclonal antibodies that bind to the protein of the Ebola virus. It has been effective in treating macaque monkeys with Ebola.

- It is too early to know if ZMapp can benefit Ebola patients 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.
 - On September 2, HHS announced a contract with Mapp Biopharmaceutical Inc. to develop and manufacture ZMapp toward the goal of U.S. Food and Drug Administration approval. As part of the project, Mapp Biopharmaceutical will manufacture a small amount of the drug for early stage clinical safety studies and nonclinical studies needed to demonstrate the drug's safety and efficacy in people.
- Some Investigational Ebola vaccines have been developed. On August 28, the National Institutes of Health (NIH) announced that initial human testing to assess safety and immune response of an investigational vaccine to prevent Ebola virus disease will begin in early September. A different investigational Ebola vaccine will also start testing in humans to assess safety and immune response in September through the U.S. Department of Defense.
- Two companies, Tekmira and Biocryst Pharmaceuticals, received funding from the U.S. Department of Defense and have therapeutic candidates for Ebola in early development. BioCryst, with NIH support, is working to develop an antiviral drug to treat Ebola; phase 1 safety testing is expected to begin later this year.

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).
 - 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).
 - 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.
- 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.)
- 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).
- 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 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.
 - CDC also issued an Alert, Level 2 travel notice for the Democratic Republic of the Congo (DRC). A small number of Ebola cases have been reported in the DRC, though current information indicates that this outbreak is not related to the ongoing Ebola outbreaks in Guinea, Liberia, Nigeria, and Sierra Leone.
- 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) 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.
- **An imported case of Ebola has been confirmed in Senegal. CDC does not have special recommendations for travelers to Senegal. If further spread is confirmed in Senegal, CDC will post a travel notice similar to the one currently posted for Nigeria.**

COLLEGES, UNIVERSITIES, AND STUDENTS

- CDC has issued advice for colleges, universities, and students about study abroad, foreign exchange, and other education-related travel, as well as advice for students who have recently traveled from a country in which an Ebola outbreak is occurring.
 - CDC advises that all non-essential travel, including education-related travel, to Guinea, Liberia, and Sierra Leone be postponed until further notice.
 - Students, faculty, and staff who have recently traveled to countries where the Ebola outbreaks are happening should consult with school authorities on what instructions to follow, and monitor their health for 21 days after returning.
 - CDC advises colleges and universities to identify students, faculty, and staff who have been in countries where Ebola outbreaks are occurring within the past 21 days and conduct a risk assessment with each person to determine his or her level of risk exposure, as well as the appropriate public health response and medical care based on CDC's Interim Guidance for Monitoring and Movement of Persons with Ebola Virus Disease Exposure (www.cdc.gov/vhf/ebola/hcp/monitoring-and-movement-of-persons-with-exposure.html).
- The full text of the guidance is available at <http://wwwnc.cdc.gov/travel/page/advice-for-colleges-universities-and-students-about-ebola-in-west-africa>.

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.

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.
- 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 U.S. 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
 - 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.
- 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 September 8, more than 90 CDC staff deployed to Guinea, Liberia, Nigeria, Senegal, and Sierra Leone are assisting with various response efforts, including surveillance, contact tracing, data management, laboratory testing, 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.
 - **CDC's Health Promotion Team, consisting of health communicators and public health advisors deployed to Guinea, Liberia, and Sierra Leone, are working closely with country embassies, UNICEF, WHO, ministries of health, and nongovernment organizations 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.
 - CDC and the Carter Center developed PSAs recorded by President Jimmy Carter for audiences in West Africa.
 - **CDC's Health Promotion Team, the U.S. embassy, and UNFPA developed a distribution plan for messages by President Obama in Guinea, translated in French.**

- In Liberia, CDC is working with UNICEF and WHO on trainings for general community health worker volunteers.
- 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 WHO's Global Outbreak Alert and Response Network and the U.S. National Institutes of Health (NIH), 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 in West Africa to provide technical assistance for developing exit screening and travel restrictions in the countries where Ebola outbreaks are occurring. This includes:
 - Assessing the capacity of 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>) and the Democratic Republic of the Congo for an unrelated outbreak of Ebola (<http://wwwnc.cdc.gov/travel/notices/alert/ebola-in-democratic-republic-of-the-congo>).
 - 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 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.
 - 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.

- 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 to see the messages.
- CDC is actively working to educate U.S. 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) 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.
 - 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) 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.

- 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.
- To date, the CDC Foundation has made initial shipments or ordered items for use by CDC staff working with local in-country personnel in the four most impacted nations—Liberia, Sierra Leone, Guinea and Nigeria. These items include forehead thermometers and batteries and face shields to assist in the medical response. Laptop computers and printers are also being provided for disease tracking and communications across the impacted countries.
- Donor funding is also being deployed for communication and outreach programs to reach healthcare workers and the public.
- The CDC Foundation is in discussions with a number of donors who have offered philanthropic support to secure needed medical supplies and other products and services.
- Beyond these materials and services, CDC has identified a number of significant needs, including developing in-country emergency operations centers that will provide a platform for incident response to effectively manage current and future outbreaks.
- There will also be unanticipated needs in response to this epidemic. The CDC Foundation is working closely with CDC to determine needs on the ground and how funds and resources provided through the Foundation can be deployed to assist in meeting some of those needs.
- More information on CDC Foundation's Global Disaster Response Fund is available at 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).
- Communicators and public health officials can help counter stigma during the Ebola response.
 - Maintain privacy and confidentiality of those seeking healthcare and those who may be part of any contact investigation.
 - Communicate early the risk or lack of risk from associations with products, people, and places.
 - Raise awareness of the potential problem.
 - Share accurate information about how the virus spreads.
 - Explain that Ebola is caused by a virus, not a person.
 - Speak out against negative behaviors, including negative social media statements about groups of people, or exclusion of people who pose no risk from regular activities.
 - Be cautious about the images that are shared. Make sure they do not reinforce stereotypes.
 - Engage with stigmatized groups in person and through media channels including news media and social media.
 - Share the need for social support for people who have returned from the region or are worried about friends or relatives in the affected region.

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
 - 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/