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Ebola Virus Disease
Dental Profession Advisory

The information below was prepared jointly by the American Dental Association (ADA), the Centers for Disease Control and Prevention (CDC), and the Organization for Safety, Asepsis and Prevention (OSAP). It was published by OSAP on October 20, 2014.

ADA, CDC, OSAP Provide Resources to Dental Professionals

The ADA remains in contact with the Centers for Disease Control and Prevention (CDC) and the Organization for Safety, Asepsis and Prevention (OSAP) regarding Ebola and is dedicated to providing the most up to date information for dental professionals on this evolving issue.

As of October 17, 2014, dental professionals are advised of the following:

A person infected with Ebola is not considered contagious until symptoms appear. Due to the virulent nature of the disease, it is highly unlikely that someone with Ebola symptoms will seek dental care when they are severely ill. However, according to the Centers for Disease Control and Prevention and the ADA Division of Science, dental professionals are advised to take a medical history, including a travel history from their patients with symptoms in which a viral infection is suspected.

As recommended by the ADA Division of Science, any person within 21 days of returning from the West African countries Liberia, Sierra Leone and Guinea may be at risk of having contacted persons infected with Ebola and may not exhibit symptoms. If this is the case, dental professionals are advised to delay routine dental care of the patient until 21 days have elapsed from their trip. Palliative care for serious oral health conditions, dental infections and pain can be provided if necessary after consulting with the patient's physician and conforming to standard precautions and physical barriers.

An elevated temperature (fever) is often a consequence of infection, but Ebola is not the only infection that may have similar signs and symptoms. The most common signs and symptoms of Ebola infection are:

- Fever (greater than 38.6℃ or 101.5℉) and severe headache
- Muscle pain
- Vomiting
- Diarrhea
- Stomach pain or unexplained bleeding or bruising

This information has been copied from the CDC and OSAP websiteS
For additional information go to www.cdc.gov.
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You are advised not to treat dental patients if they have these signs and symptoms for Ebola. If a patient is feeling feverish and their travel history indicates they may be at risk of Ebola, dental professionals and staff in contact with the patient should:

- Immediately protect themselves by using standard precautions with physical barriers (gowns, masks, face protection, and gloves)
- Immediately call 911 on behalf of the patient
- Notify the appropriate state or local health department authorities
- Ask the health department to provide you and your staff with the most up-to-date guidance on removing and disposing of potentially contaminated materials and equipment, including the physical barriers.

The Ebola virus is spread through **direct contact** (through broken skin or mucous membranes) with blood and body fluids (urine, feces, saliva, vomit and semen) of a person who is sick with Ebola, or with objects (like needles) that have been contaminated with the virus. Ebola is not spread through the air or by water or, in general, by food. Again**, there is no reported risk of transmission of Ebola from asymptomatic infected patients.**

Information and resources on Ebola are posted on the CDC's website at cdc.gov. A checklist for healthcare providers (PDF) specific to Ebola is included on the site.

Additional Resources

- CDC Health Alert Network (HAN) — Evaluating Patients for Possible Ebola Virus Disease: Recommendations for Healthcare Personnel and Health Officials
- CDC Recommended Infection Control Practices for Dentistry
- CDC Health Care Provider Preparedness Checklist for Ebola Virus Disease (PDF)
- The ADA Practical Guide to Effective Infection Control (P692)
- The Organization for Safety, Asepsis and Prevention

Symptoms may appear anywhere from 2 to 21 days after exposure to Ebola, but the average is 8 to 10 days.

Recovery from Ebola depends on good supportive clinical care and the patient's immune response. People who recover from Ebola infection develop antibodies that last for at least 10 years

Transmission

Facts:

1. **You can't get Ebola through the air**
2. **You can't get Ebola through water**
3. **You can't get Ebola through the weather**

When an infection does occur in humans, the virus can be spread in several ways to others. Ebola is spread through direct contact (through broken skin or mucous membranes in, for example, the eyes, nose, or mouth) with:

* Blood or body fluids (including but not limited to urine, saliva, sweat, feces, vomit, breast milk, and semen) of a person who is sick with Ebola
* Objects (like needles and syringes) that have been contaminated with the virus

* Infected animals
* Ebola is not spread through the air or by water, or in general, by food

There is no evidence that mosquitos or other insects can transmit Ebola virus. Only mammals (for example, humans, bats, monkeys, and apes) have shown the ability to become infected with and spread Ebola virus.

During outbreaks of Ebola, the disease can spread quickly within healthcare settings (such as a clinic or hospital). Exposure to Ebola can occur in healthcare settings where hospital staff are not wearing appropriate protective equipment, including masks, gowns, and gloves and eye protection.

Proper cleaning and disposal of instruments, such as needles and syringes, is also important. If instruments are not disposable, they must be sterilized before being used again. Without adequate sterilization of the instruments, virus transmission can continue and amplify an outbreak.

Once someone recovers from Ebola, they can no longer spread the virus. However, Ebola virus has been found in semen for up to 3 months. Abstinence from sex (including oral sex) is recommended for at least 3 months. If abstinence is not possible, condoms may help prevent the spread of disease.

Risk of Exposure

Ebola viruses are found in several African countries. Ebola was first discovered in 1976 near the Ebola River in what is now the Democratic Republic of the Congo. Since then, outbreaks of Ebola among humans have appeared sporadically in Africa.

Risk

All cases of human illness or death from Ebola have occurred in Africa (with the exception of several laboratory contamination cases: one in England and two in Russia). One travel-associated case was diagnosed in the United States on September 30, 2014. Two healthcare workers at Texas Presbyterian Hospital who provided care for the index patient have tested positive for Ebola. CDC confirms that the healthcare workers are 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. The virus also can be spread through contact with objects (like clothes, bedding, needles, syringes/sharps or medical equipment) that have been contaminated with the virus or with infected animals.

Case Definition for Ebola Virus Disease (EVD)

Early recognition is critical for infection control. Health care providers should be alert for and evaluate any patients suspected of having Ebola Virus Disease (EVD).

Epidemiologic risk factors within the past 21 days before the onset of symptoms, such as contact with blood or other body fluids of a patient known to have or suspected to have EVD; residence in—or travel to—an area where EVD transmission is active

Probable Case

A person whose epidemiologic risk factors include high or low risk exposure(s) (see below)
A case with laboratory-confirmed diagnostic evidence of Ebola virus infection

Exposure Risk Levels

Levels of exposure risk are defined as follows:

High risk exposures

A high risk exposure includes any of the following:

* Percutaneous (e.g., needle stick) or mucous membrane exposure to blood or body fluids of EVD patient
* Direct skin contact with, or exposure to blood or body fluids of, an EVD patient without appropriate personal protective equipment (PPE)
* Processing blood or body fluids of a confirmed EVD patient without appropriate PPE or standard biosafety precautions

Low risk exposures

* A low risk exposure includes any of the following:
* Household contact with an EVD patient
* Other close contact with EVD patients in health care facilities or community settings. Close contact is defined as being within approximately 3 feet (1 meter) of an EVD patient or within the patient's room or care area for a prolonged period of time (e.g., health care personnel, household members) while not wearing recommended personal protective equipment (i.e., standard, droplet, and contact precautions; see Infection Prevention and Control Recommendations(http://www.cdc.gov/vhf/ebola/hcp/patient-management-us-hospitals.html))
* having direct brief contact (e.g., shaking hands) with an EVD patient while not wearing recommended personal protective equipment.
* Brief interactions, such as walking by a person or moving through a hospital, do not constitute close contact

No known exposure

Having been in a country in which an EVD outbreak occurred within the past 21 days and having had no high or low risk exposures

Frequently Asked Questions

1. How can I determine whether a particular EPA-registered hospital disinfectant is appropriate for use in the room of a patient with suspected or confirmed Ebola virus infection?

Begin by looking at the product label or product insert or, if these are not available, search the EPA search engine for this information. Users should be aware that an 'enveloped' or 'non-enveloped virus' designation may not be included on the container label. Instead check

the disinfectant's label for at least one of the common non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, poliovirus).

2. Are there special instructions for cleaning and disinfecting the room of a patient with suspected or confirmed Ebola virus infection?

Daily cleaning and disinfection of hard, non-porous surfaces (e.g., high-touch surfaces such as tables, housekeeping surfaces such as floors and counters) should be done. Before disinfecting a surface, cleaning should be performed. In contrast to disinfection where products with specific claims are used, any cleaning product can be used for cleaning tasks. Use cleaning and disinfecting products according to label instructions. Check the disinfectant's label for specific instructions for inactivation of any of the non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, poliovirus) follow label instructions for use of the product that are specific for inactivation of that virus. Use disposable cleaning cloths, mop cloths, and wipes and dispose of these in leak-proof bags. Use a rigid waste receptacle designed to support the bag to help minimize contamination of the bag's exterior.

3. How should spills of blood or other body substances be managed?

The basic principles for blood or body substance spill management are outlined in the United States Occupational Safety and Health Administration (OSHA) Bloodborne Pathogen Standards (29 CFR 1910.1030).[5] CDC guidelines recommend removal of bulk spill matter, cleaning the site, and then disinfecting the site.[4] For large spills, a chemical disinfectant with sufficient potency is needed to overcome the tendency of proteins in blood and other body substances to neutralize the disinfectant's active ingredient. An EPA-registered hospital disinfectant with label claims for non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, poliovirus) and instructions for cleaning and decontaminating surfaces or objects soiled with blood or body fluids should be used according to those instructions.

4. How should disposable materials (e.g., any single-use PPE, cleaning cloths, wipes, single-use microfiber cloths, linens, food service) and linens, privacy curtains, and other textiles be managed after their use in the patient room?

These materials should be placed in leak-proof containment and discarded appropriately. To minimize contamination of the exterior of the waste bag, place this bag in a rigid waste receptacle designed for this use. Incineration or autoclaving as a waste treatment process is effective in eliminating viral infectivity and provides waste minimization. If disposal requires transport offsite then this should be done in accordance with the U.S. Department of Transportation's (DOT) Hazardous Materials Regulations (HMR, 49 C.F.R., Parts 171-180).[6, 7] Guidance from DOT has been released for Ebola.[7]

5. Is it safe for Ebola patients to use the bathroom?

Yes. Sanitary sewers may be used for the safe disposal of patient waste. Additionally, sewage handling processes (e.g., anaerobic digestion, composting, and disinfection) in the United States are designed to inactivate infectious agents.

6. How long does the Ebola virus persist in indoor environments?

Only one laboratory study, which was done under environmental conditions that favor virus persistence, has been reported. This study found that under these ideal conditions Ebola virus could remain active for up to six days.[1] In a follow up study, Ebolavirus was found,

relative to other enveloped viruses, to be quite sensitive to inactivation by ultraviolet light and drying; yet sub-populations did persist in organic debris.[2]

In the only study to assess contamination of the patient care environment during an outbreak, conducted in an African hospital under "real world conditions", virus was not detected by either nucleic acid amplification or culture in any of 33 samples collected from sites that were not visibly bloody. Virus was detected on a blood-stained glove and bloody intravenous insertion site by nucleic acid amplification, which may detect non-viable virus, but not by culture for live, infectious virus.[3] Based upon these data and what is known regarding the environmental infection control of other enveloped RNA viruses, the expectation is with consistent daily cleaning and disinfection practices in U.S. hospitals that the persistence of Ebola virus in the patient care environment would be short – with 24 hours considered a cautious upper limit.

7. Are wastes generated during delivery of care to Ebola virus-infected patients subject to select agent regulations?

As long as facilities treating Ebola virus-infected patients follow the CDC's Infection Prevention and Control Recommendations for Hospitalized Patients with Known or Suspected Ebola Hemorrhagic Fever in U.S. Hospitals(http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html); waste generated during delivery of care to Ebola virus-infected patients would not be subject to Federal select agent regulations (See the exclusion provision 42 CFR § 73.3(d)(1)). However, this would not apply to any facility that intentionally collected or otherwise extracted the Ebola virus from waste generated during the delivery of patient care.