



TEAMSTERS Safety & Health FACTS

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Ebola Virus Disease (EVD) (Ebola HF, Ebola Hemorrhagic Fever, Ebola Virus, and Ebola Virus Disease) Frequently Asked Questions: Health Care Providers

Key Principals for Healthcare Workers

1. Prior to working with Ebola patients, all healthcare workers involved in the care of Ebola patients must have received repeated training and have demonstrated competency in performing all Ebola-related infection control practices and procedures, and specifically in donning/doffing proper PPE.
2. While working in PPE, healthcare workers caring for Ebola patients should have no skin exposed.
3. The overall safe care of Ebola patients in a facility must be overseen by an onsite manager at all times, and each step of every PPE donning/doffing procedure must be supervised by a trained observer to ensure proper completion of established PPE protocols.

Safe Management of Patients with EVD

1. What should hospitals do if they have a patient with suspected EVD?

Early recognition is critical for infection control. Health Care Providers (HCPs) should be alert for and evaluate any patients suspected of having EVD who have:

- a) A fever of greater than 101.5 degrees Fahrenheit, and additional symptoms such as severe headache, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained hemorrhage; AND
- b) Risk factors within the past 3 weeks 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 (Liberia, Guinea, Sierra Leone, Nigeria); or direct handling of bats, rodents, or primates from disease endemic areas.

2. When should patients in hospitals be tested if suspected of EVD?

The Centers for Disease Control and Prevention (CDC) recommend testing for all persons with the onset of fever within 21 days of having a high-risk exposure such as:

- a) Percutaneous or mucous membrane exposure or direct skin contact with body fluids of a person with a confirmed or suspected case of EVD without appropriate personal protective equipment (PPE),
- b) Laboratory processing of body fluids of suspected or confirmed EVD cases without appropriate PPE or standard biosafety precautions, or
- c) Participation in funeral rites or other direct exposure to human remains in the geographic area where the outbreak is occurring without appropriate PPE.

For persons with a high-risk exposure but without a fever, testing is recommended only if there are other compatible clinical symptoms present and blood work findings are abnormal (i.e. thrombocytopenia $<150,000$ cells/ μ L and/or elevated transaminases).

3. What should Laboratory personnel do when suspected EVD samples come in for processing?

Any person testing specimens from a patient with a suspected case of EVD should wear gloves, water-resistant gowns, full face shield or goggles, shoe coverings and masks to cover the entire nose and mouth, and as an added precaution use a certified class II Biosafety cabinet or Plexiglas splash guard with PPE to protect skin and mucous membranes. All manufacturer-installed safety features for laboratory instruments should be used.

4. If a patient in a hospital is suspected to have or has confirmed EVD, what infection control precautions should be put into place?

If a patient in a U.S. hospital is suspected or known to have EVD, healthcare providers should follow the most up-to-date CDC guidelines regarding contact and droplet precautions, including the following recommendations:

- a) Isolate the patient: Patients should be isolated in a negative pressure single patient room (containing a private bathroom) with the door closed.
- b) Wear appropriate PPE:
 - a. When entering patient rooms: gloves, gown (fluid resistant or impermeable), eye protection (goggles or face shield), and a facemask.

- b. When handling copious amounts of bodily fluids (e.g. blood, other body fluids, vomit, or feces): double gloving, gown (fluid resistant or impermeable), eye protection (goggles or face shield), and a facemask, disposable shoe covers, and leg coverings.
- c) Restrict visitors: Avoid entry of visitors into the patient's room. Exceptions may be considered on a case by case basis for those who are essential for the patient's wellbeing. A logbook should be kept to document all persons entering the patient's room.
- d) Avoid aerosol-generating procedures: If performing these procedures, PPE should include respiratory protection (N-95 or higher filtering face-piece respirator). The procedure should be performed in an airborne infection isolation room.
- e) Implement environmental infection control measures: Diligent environmental cleaning and disinfection and safe handling of potentially contaminated materials is of paramount importance as blood, sweat, vomit, feces, urine, and other body secretions represent potentially infectious materials and should be handled following CDC protocols.

5. What are considered High Risk Exposures

A high-risk exposure includes any of the following:

- a) Percutaneous (e.g., needle stick) or mucous membrane exposure to blood or body fluids of EVD patient
- b) Direct skin contact with, or exposure to blood or body fluids of an EVD patient without appropriate personal protective equipment (PPE)
- c) Processing blood or body fluids of a confirmed EVD patient without appropriate PPE or standard biosafety precautions
- d) Direct contact with a dead body without appropriate PPE in a country where an EVD outbreak is occurring.

Infection Prevention and Control Recommendations

1. Should EVD patients have dedicated patient care equipment?

- a) Dedicated medical equipment (preferably disposable, when possible) should be used for the provision of patient care.
- b) All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to manufacturer's instructions and hospital policies.

2. What Personal Protective Equipment does the CDC recommend for Health Care Providers (HCPs)

All persons entering the patient room should wear at least:

- a) Gown (fluid resistant or impermeable) (single use)
- b) Apron (fluid resistant or impermeable) (single use)
- c) Surgical hood extending to shoulders and full face shield (single use)
- d) Nitrile examination gloves with extended cuffs-doubled (single use)
- e) NIOSH-certified powered air-purifying respirator (PAPR) or N95 respirator (single use)
- f) Boot or shoe covers (fluid resistant or impermeable) (single use)

Recommended PPE should be worn by HCPs upon entry into patient rooms or care areas. Upon exit from the patient room or care area, PPE should be carefully removed without contaminating one's eyes, mucous membranes, or clothing with potentially infectious materials, and discarded, or for re-useable PPE (PAPR), cleaned and disinfected according to the manufacturer's reprocessing instructions and hospital policies.

3. Is the order in which I put on or take off my PPE important?

Instructions for donning (putting on) and doffing (removing) PPE have been published in a separate fact sheet on the teamster website titled: "Personal Protective Equipment for Handling Infectious Agents". The order in which you remove your PPE is **VERY IMPORTANT**. Hand hygiene should be performed immediately after removal of PPE.

4. What precautions should be taken for aerosol generating procedures (AGPs)?

Avoid AGPs for Ebola HF patients. If performing AGPs, use a combination of measures to reduce exposures from aerosol-generating procedures when performed on EVD patients.

- a) Visitors should not be present during aerosol-generating procedures.
- b) Limit the number of HCP present during the procedure to only those essential for patient care and support.
- c) Conduct the procedures in a private room and ideally in an Airborne Infection Isolation Room (AIIR) when feasible. Room doors should be kept closed during the procedure except when entering or leaving the room, and entry and exit should be minimized during and shortly after the procedure.
- d) HCPs should wear, at a minimum, the PPE described in number 2 above.
- e) Respiratory protection (N95, PAPR, elastomeric respirators) should be fit-tested to the worker prior to use.
- f) Conduct environmental surface cleaning following procedures
- g) If re-usable equipment or PPE are used, they should be cleaned and disinfected according to manufacturer instructions and hospital policies.
- h) Collection and handling of soiled re-usable respirators must be done by trained individuals using PPE.

5. If I am wearing gloves should I still practice safe hand hygiene?

Health care providers (HCPs) should perform hand hygiene frequently, including before and after all patient contact, contact with potentially infectious material, and before putting on and upon removal of PPE, including gloves. Healthcare facilities should ensure that supplies for performing hand hygiene are available. Hand hygiene in healthcare settings can be performed by washing with soap and water or using alcohol-based hand rubs. If hands are visibly soiled, use soap and water, not alcohol-based hand rubs.

6. What are safe injection practices?

Facilities should follow safe injection practices by practicing standard protocols and as detailed by the CDC in their document *Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings 2007* (<http://www.cdc.gov/injectionsafety/unsafePractices.html>). Any injection equipment or parenteral medication container that enters the patient treatment area should be dedicated to that patient and disposed of at the point of use.

Monitoring and Management of Potentially Exposed Personnel

1. What should my employer do if I am exposed?

- a) Facilities should develop policies for monitoring and management of potentially exposed HCP.
- b) Facilities should develop sick leave policies for HCP that are non-punitive, flexible and consistent with public health guidance and/ or bargaining unit contract language.
- c) Ensure that all HCP, including staff who are not directly employed by the healthcare facility but provide essential daily services, are aware of the sick leave policies.
- d) Persons with percutaneous or mucocutaneous exposures to blood, body fluids, secretions, or excretions from a patient with suspected Ebola HF should:
 - i. Stop working and immediately wash the affected skin surfaces with soap and water. Mucous membranes (e.g., conjunctiva) should be irrigated with copious amounts of water or eyewash solution.
 - ii. Immediately contact occupational health/supervisor for assessment and access to post exposure management services for all appropriate pathogens.
- e) HCPs who develop sudden onset of fever, intense weakness or muscle pains, vomiting, diarrhea, or any signs of hemorrhage after an unprotected exposure (i.e. not wearing or provided with the recommended PPE at the time of patient contact or through direct contact to blood or body fluids) to a patient with EVD should:

- i. Not report to work or should immediately stop working.
 - ii. Notify their supervisor.
 - iii. Seek prompt medical evaluation and testing.
 - iv. Notify local and state health departments.
 - v. Comply with work exclusion until deemed no longer infectious to others.
- f) Asymptomatic HCP who had an unprotected exposure (i.e. not wearing recommended PPE at the time of patient contact or through direct contact to blood or body fluids) to a patient with Ebola HF:
- i. Should receive medical evaluation and follow-up care including fever monitoring twice daily for 21 days after the last known exposure.

NOTE: The Union maintains that employees should receive FULL pay and benefits during the 21day monitoring periods and subsequent related treatments.

Cleaning and Waste Disposal

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 EVD?

EPA-registered disinfectants designated for use on non-enveloped viruses should be used to disinfect EVD contaminated materials and/or equipment. Note that there are no product claims or product labels that specify use with the Ebola virus. Enveloped viruses such as Ebola are susceptible to a broad range of hospital disinfectants used to disinfect hard, non-porous surfaces. As a precaution, selection of a disinfectant product with a higher potency than what is normally required for an enveloped virus is recommended at this time. EPA-registered hospital disinfectants with label claims against non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, polio virus) are broadly antiviral and capable of inactivating both enveloped (Ebola) and non- enveloped viruses.

Begin by looking at the product label or product insert for the terms virucidal, viral disinfectant, broad range disinfectant, broad spectrum disinfectant, disinfectant suitable for non-enveloped viruses etc. 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 applicability on at least one of the common non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, polio virus). Chemicals without use or claim statements or labels can be researched via EPA’s website <http://iaspub.epa.gov/apex/pesticides/f?p=PPLS:1>.

2. What Personal Protective Equipment (PPE) should environmental services staff use.

Environmental services staff should wear at a minimum:

- a) disposable gloves,

- b) gown (fluid resistant/impermeable),
- c) eye protection (goggles or face shield), and
- d) Fit tested N95 respirator to protect against direct skin and mucous membrane exposure of cleaning chemicals, contamination, and splashes or spatters during environmental cleaning and disinfection activities.
- e) Boot or shoe covers

If reusable heavy-duty gloves are used for cleaning and disinfecting, they should be disinfected and kept in the room or anteroom. Staff should be instructed in the proper use of personal protective equipment including safe removal protocol to prevent contaminating themselves or others in the process. Contaminated equipment or PPE that is single-use or cannot be cleaned should be disposed of per hospital protocol.

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

Daily cleaning and disinfection of hard, non-porous surfaces (e.g., high-touch surfaces such as bed rails and over-bed tables, housekeeping surfaces such as floors and counters) should be done. Before disinfecting a surface, cleaning should be performed. Use cleaning and disinfecting products according to label instructions. Check the disinfectant's label for specific instructions on contact time for inactivation of any of the non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, and poliovirus) and 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. Contaminated equipment should be disposed of per hospital protocol.

4. How long does EVD persist in indoor environments?

In ideal laboratory conditions Ebola virus could remain active outside a host for up to six days, however, with consistent daily cleaning and disinfection practices, the persistence of Ebola virus in the patient care environment would be short—with 24 hours considered a cautious upper time limit.

5. 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). CDC guidelines recommend removal of bulk spill matter, cleaning the site, and then disinfecting the site. 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.

6. 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 per hospital protocol. To minimize contamination of the exterior of the waste bag, place this bag in a rigid waste receptacle designed for this use. Incineration as a waste treatment process is effective in eliminating viral infectivity and provides waste minimization. Check, however, with your state's regulated medical waste program for more guidance and coordinate your waste management activities for the patient's isolation area with your medical waste contractor.

7. Are wastes generated during delivery of care to EVD infected patients subject to select agent regulations covered in 42 CFR §73.3?

As long as facilities treating EVD 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", waste generated during delivery of care to EVD patients would not be subject to federal select agent regulations (42 CFR § 73.3(d)(1)). Select agent regulations implement the provisions of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 setting forth the requirements for possession, use, and transfer of select agents and toxins. Note that this exclusion would not apply to any facility that intentionally collected or otherwise extracted the Ebola virus from waste generated during the delivery of patient care.

8. Is it safe for Ebola patients to flush infected bodily fluids down the toilets and drains?

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

9. Are Ebola contaminated items considered regulated medical waste (RMW) or Category A Infectious Substances?

Medical waste contaminated with Ebola virus is a Category A infectious substance regulated as a hazardous material under the U.S. Department of Transportation's (DOT's) Hazardous Materials Regulations (HMR; 49 CFR, Parts 171-180). The HMR apply to any material DOT determines is capable of posing an unreasonable risk to health, safety, and property when transported in interstate, intrastate, and foreign commerce.

- Off-site commercial transport of Ebola-associated medical waste requires strict compliance with the HMRS. For more information on the HMR requirements see the Teamster Fact Sheets "Transporting Ebola Contaminated Items" and "Ebola Medical Waste Management".
- Ebola-associated medical waste that has been inactivated (i.e. autoclaved) or incinerated is no longer considered a Category A infectious substance and may be transported as regulated medical waste (RMW). Ebola-associated waste that has been appropriately inactivated or incinerated is subject to state and local regulations (<http://www.epa.gov/waste/nonhaz/industrial/medical/programs.htm>).

10. Are there specific packaging or labeling requirements for Category A Infectious Substances being offered for transport?

Category A infectious substance must comply with the packaging requirements found in 49 CFR§173.196. Category A infectious substances have more stringent packaging requirements and are not included in the definition of a "regulated medical waste." An infectious substance must conform to all applicable HMR requirements when offered for transportation or transported by air, highway, rail, or water. See Teamster Fact Sheet "Transporting Ebola Contaminated Items" for more details.

Worker Rights

1. What rights or protections do I have as an employee regarding my health and safety while at work?

Any worker who may reasonably be expected to come into contact with the Ebola virus, either from the work environment or from direct contact with individuals infected, has the right to know the hazards associated with this potential exposure and how to protect themselves during work activities.

Any occupational exposure to blood or other potentially infectious materials (OPIM) fall under the requirements in the Bloodborne Pathogens Standard (29 CFR 1910.1030). Other occupational exposures may require protection of workers under the PPE Standard (29 CFR 1910.132), Respiratory Protection Standard (29 CFR 1910.134), or the General Duty Clause of the OSH Act (29 USC 654(a)).

Employers should educate workers about the hazards to which they are exposed and to provide reasonable means by which to abate those hazards. Additional information about communicating job hazards to workers is available on OSHA's Hazard Communication page. While OSHA's Hazard Communication Standard (29 CFR 1910.1200) does not apply to the Ebola virus itself, employers may be required to comply with the standard when chemicals are used for cleaning and disinfection of the work environment.

2. What whistleblower rights do I have?

Section 11(c) of the Occupational Safety & Health Act (OSHA) (1970) [29 U.S.C. §660(c)] protects employees from retaliation for exercising a variety of rights guaranteed under the Act, such as filing a S&H complaint with OSHA or their employers, participating in an inspection, etc. 29 CFR 1977. You must file a complaint with OSHA **within 30 days of the alleged reprisal**. In states with approved state plans, employees may file a complaint under the OSH Act with both the State and Federal OSHA. A whistleblower complaint can be filed on line by visiting <https://www.osha.gov/whistleblower/WBComplaint.html>. Other methods of filing a whistleblower complaint can be found at http://www.whistleblowers.gov/complaint_page.html.

References:

- Centers for Disease Control (CDC), <http://www.cdc.gov/vhf/ebola/>
- Occupational Health and Safety Administration (OSHA), <https://www.osha.gov/SLTC/ebola/index.html>
- National Institute for Occupational Safety and Health (NIOSH), <http://www.cdc.gov/niosh/topics/ebola/>
- Pipeline and Hazardous Materials Administration (PHMSA), <http://phmsa.dot.gov/hazmat/phmsa-provides-guidance-for-transporting-ebola-contaminated-items>
- Association for Professionals in Infection Control and Epidemiology (APIC), <http://www.apic.org/>