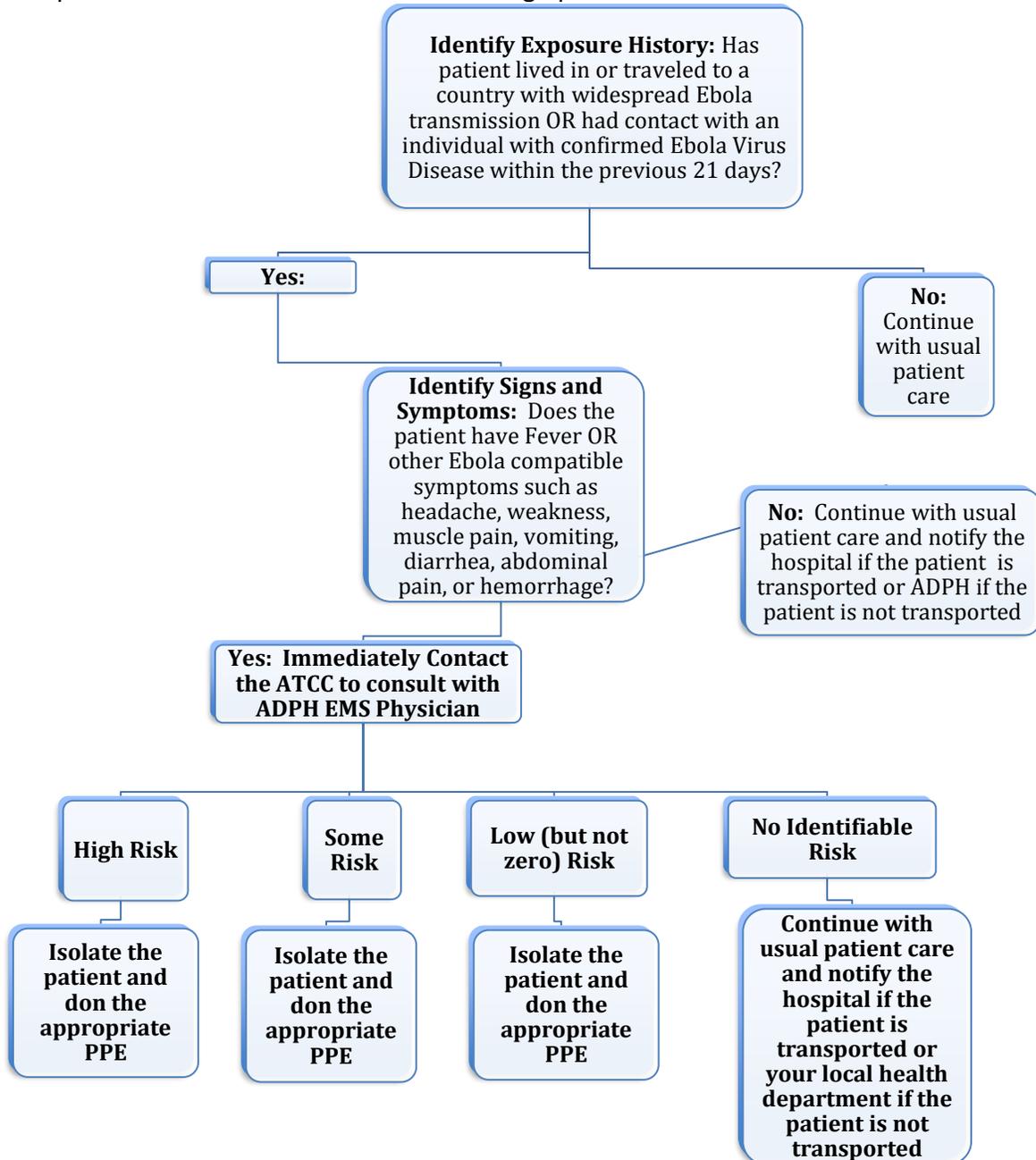




Office of Emergency Medical Services
Update #3: Interim Guidelines for Emergency Medical Service Personnel Regarding
Care and Transport of Patients with Suspected Ebola Virus Disease (EVD)

The CDC is continuing to monitor the outbreak of EVD in West Africa. Early symptomatic recognition and reporting are critical to infection control.

EMS providers should determine the following upon arrival:



Definitions:**High Risk:**

- Percutaneous (e.g. needle stick) or mucous membrane exposure to blood or body fluids of a person with Ebola while the person was symptomatic
- Exposure to the blood or body fluids (including but not limited to feces, saliva, sweat, urine, vomit, and semen) of a person with Ebola while the person was symptomatic without appropriate personal protective equipment (PPE)
- Processing blood or body fluids of a person with Ebola while the person was symptomatic without appropriate PPE or standard biosafety precautions
- Direct contact with a dead body without appropriate PPE in a country with widespread Ebola virus transmission or cases in urban areas with uncertain control measures
- Having lived in the immediate household and provided direct care to a person with Ebola while the person was symptomatic

Some Risk:

- In countries with widespread transmission or cases in urban areas with uncertain control measures: Direct contact while using appropriate PPE with a person with Ebola while the person was symptomatic or with the person's body fluids OR any direct patient care in other healthcare settings
- Close contact in households, healthcare facilities, or community settings with a person with Ebola while the person was symptomatic (Close contact is defined as being for a prolonged period of time while not wearing appropriate PPE within approximately 3 feet of a person with Ebola while the person was symptomatic)

Low (but not zero) Risk:

- Having been in a country with widespread Ebola virus transmission or cases in urban areas with uncertain control measures within the past 21 days and having had no known exposures
- Having brief direct contact (e.g., shaking hands) while not wearing appropriate PPE, with a person with Ebola while the person was in the early stage of disease
- Brief proximity, such as being in the same room for a brief period of time, with a person with Ebola while the person was symptomatic
- In countries without widespread Ebola virus transmission or cases in urban areas with uncertain control measures: direct contact while using appropriate PPE with a person with Ebola while the person was symptomatic
- Traveled on an aircraft with a person with Ebola while the person was symptomatic

No Identifiable Risk:

- Contact with an asymptomatic person who had contact with a person with Ebola
- Contact with a person with Ebola before the person developed symptoms
- Having been more than 21 days previously in a country with widespread Ebola virus transmission or cases in urban areas with uncertain control measures

- Having been in a country with Ebola cases, but without widespread Ebola virus transmission or cases in urban settings with uncertain control measures, and not having any other exposures as defined above
- Having remained on or in the immediate vicinity of an aircraft or ship during the entire time that the conveyance was present in a country with widespread Ebola virus transmission or cases in urban areas with uncertain control measures, and having had no direct contact with anyone from the community

Since Ebola is transmitted through direct contact with the blood or bodily fluids of an infected symptomatic person, if a patient is determined to have high, some or low epidemiologic risk factors for Ebola using the above guidance, the following guidelines should be followed:

- **Isolate the patient:** Patients should be separated from other individuals as much as possible (e.g., in the back of the ambulance with the door closed).
- **Wear appropriate personal protective equipment (PPE):** Standard, contact and droplet precautions should be implemented immediately. EMS personnel should receive training and demonstrate competency in donning and doffing the required PPE. While working in PPE, healthcare providers caring for Ebola patients should have no skin exposed. Prior to donning PPE, remove all personal items such as watches or jewelry and if possible change into disposable garments. Healthcare providers entering into contact with the patient should wear 2 pairs of nitrile gloves with extended cuffs on the outer pair, a single gown that extends to at least mid-calf (impermeable), boot covers to mid-calf, and an N-95 facemask with full face shield and surgical hood extending to shoulders prior to coming into contact with the patient. An impermeable unibody suit may be worn with separate shoe or boot covers in lieu of a gown, head covering, and leg coverings. If wearing a unibody suit without a hood, additional head covering must be worn. Additional PPE such as impermeable aprons may be required in certain situations (e.g., copious amounts of blood, other body fluids, vomit, or feces present in the environment). If desired, it is acceptable but not required to use a higher standard of respiratory protection such as an air purifying respirator (APR) with full face shield, and head covering or a powered air purifying respirator (PAPR) with full face shield, helmet, or headpiece, particularly when caring for a patient who is experiencing copious fluid production; any reusable helmet or headpiece must be covered with a disposable hood that reaches the shoulders. Because Ebola is not an airborne disease, there is no need for airborne precautions or self contained breathing apparatus. After use, PPE should be carefully removed without contaminating one's eyes, mucous membranes, or clothing with potentially infectious materials. The removal of used PPE is a high-risk process that requires a structured procedure, a trained observer, and a designated area for removal to ensure protection and safety. If tape is used to secure the PPE, take care to remove it gently to avoid splashing of fluids. If desired, PPE may be wiped clean using

disposable wipes and bleach solution or an EPA-registered hospital disinfectant prior to removal. Avoid splashing or spraying cleaning fluids onto PPE due to the risk of accidental contamination. Used PPE should be placed into a medical waste container at the hospital or double bagged and held in a secure location. The clothing worn under PPE should be discarded with medical waste if it is disposable or if there is any suspicion of contamination.

- **Limit exposure:** Limit the number of EMS providers who come into contact with the patient to the lowest number necessary to safely transport the patient. In most cases, this will be two EMS providers in the patient care compartment and one driver.
- **Patient care considerations:** In the pre-hospital setting, only Basic Life Support care should be provided to known Ebola patients. Limit procedures to only those that are absolutely necessary prior to arrival at the hospital. Use caution when approaching a patient with Ebola. Illness can cause delirium with erratic behavior that can place EMS personnel at risk of infection (e.g., flailing or staggering).
- **Avoid aerosol-generating procedures:** In the pre-hospital setting, these procedures should not be performed by EMS personnel on Ebola patients. Examples of these procedures include airway management, suctioning, inhaled nebulizer treatments, and cardiopulmonary resuscitation.
- **Ambulance preparation and patient care equipment:** Prior to transport of a suspected Ebola patient, it is acceptable to remove all medical equipment from the patient compartment of the ambulance in order to minimize contamination. If desired and available, the interior of the patient compartment may be draped in water-impermeable barrier such as plastic sheeting prior to patient transport in order to facilitate easier decontamination after completion of the transport. Use of medical equipment should be kept to a minimum. Dedicated medical equipment (preferably disposable) should be used for the provision of patient care when absolutely necessary. All non-dedicated, non-disposable medical equipment used for patient care should be cleaned and disinfected according to manufacturer's instructions before subsequent use. Patients who are experiencing copious fluid production may require measures to contain fluids during transport. Consider the use of adult undergarments, absorbent pads, and water-impermeable sheeting around the patient for transport in order to limit contamination of the ambulance patient compartment.
- **Hospital notification:** EMS staff should notify the receiving healthcare facility in advance when they are bringing a patient with suspected Ebola, so that proper infection control precautions can be taken.
- **Patient transport into hospital:** Movement of suspected Ebola patients into hospital or healthcare facilities should be restricted to entrances away from public waiting areas. Suspect cases should not be moved through or temporarily left in waiting rooms.
- **Personal decontamination:** Hand hygiene should be performed frequently, including before and after all patient contact, contact with potentially infectious material and before putting on and upon removal of PPE, including gloves.

When possible, shower with soap and water after caring for a patient with suspected Ebola, particularly if the patient is experiencing copious fluid production or if there is any suspicion of self-contamination.

- **Environmental decontamination:** 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. All surfaces in the patient care area must be cleaned and disinfected after transport. Persons performing environmental cleaning and disinfection should wear recommended PPE (described above). Follow standard procedures, per manufacturers' instructions, for cleaning and/or disinfection of environmental surfaces and equipment. EPA-registered hospital disinfectants with a label claim for one of the non-enveloped viruses (e.g., norovirus, rotavirus, adenovirus, poliovirus) to disinfect environmental surfaces may be used. Disinfectant should be available in spray bottles or as commercially prepared wipes for use during transport. Alternately, a 1:50 dilution of household bleach that is prepared fresh daily can be used to disinfect environmental surfaces. A 1:10 dilution of household bleach that is prepared fresh daily can be used to treat spills before covering with an absorbent material and wiping up. After bulk waste is wiped up, the surface should be disinfected as described above.
- **Post-exposure guidance:** EMS personnel who are exposed to blood, bodily fluids, secretions, or excretions from a patient with suspected or confirmed Ebola should immediately wash the affected skin surfaces with soap and water. Mucous membranes should be irrigated with a large amount of water or eyewash solution. Personnel should contact occupational health and supervisors and receive medical evaluation and follow up care; monitoring requirements will be determined in consultation with ADPH.

Consultation Requirement for EMS Providers:

If a patient is determined to have a possible Ebola exposure and symptoms, immediate consultation with an ADPH OEMS physician should be accomplished by immediately contacting the Alabama Trauma Communications Center (ATCC) at 1-800-359-0123, or Southern LINC EMS Fleet 55: Talkgroup 10/Private 55*380, or Nextel: 154*132431*4.

Reporting Requirement for EMS Providers:

Confirmed or suspect cases of any viral hemorrhagic fever, including EVD, must be reported immediately to the **Alabama Department of Public Health (ADPH)**. After consulting with the ADPH OEMS physician through the ATCC on patient care and PPE, EMS personnel must contact the ADPH Epidemiology Division at 1-800-338-8374. If the patient is transported to a hospital, you will be asked to provide patient information and the name of the facility to which the patient was transported. If the patient is

deceased or is not transported, you must complete the [ADPH Ebola Virus Disease Consultation Record](#) and submit to ADPH via fax to 1-334-206-3734 or email to cdfax@adph.state.al.us.

Additional Resources:

Alabama Department of Public Health: www.adph.org/ebola

Centers for Disease Control and Prevention: <http://www.cdc.gov/vhf/ebola/index.html>

Detailed Emergency Medical Services (EMS) Checklist for Ebola Preparedness:
<http://www.cdc.gov/vhf/ebola/pdf/ems-checklist-ebola-preparedness.pdf>

Interim Guidance for Emergency Medical Services (EMS) Systems and 9-1-1 Public Safety Answering Points (PSAPs) for Management of Patients with Known or Suspected Ebola Virus Disease in the United States: <http://www.cdc.gov/vhf/ebola/hcp/interim-guidance-emergency-medical-services-systems-911-public-safety-answering-points-management-patients-known-suspected-united-states.html>

Interim Guidance for Environmental Infection Control in Hospitals for Ebola Virus:
<http://www.cdc.gov/vhf/ebola/hcp/environmental-infection-control-in-hospitals.html>