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**AFT Nurses and
Health Professionals** ❤️

Ebola Virus Disease

The most extensive outbreak of Ebola virus disease (EVD) in history is unfolding in Western Africa. Thousands of people have been exposed to this highly infectious and deadly disease. Many have died. The outbreak in Africa may rage on for months; the affected countries lack the public health infrastructure to contain the outbreak and support infected patients. The World Health Organization and the U.S. Centers for Disease Control and Prevention (CDC) are working hard to develop methods to contain the outbreak, and to develop promising vaccines and treatment.

To date, three healthcare workers who contracted EVD while treating patients in Africa have returned to the United States for treatment. No other confirmed cases have been identified in the U.S. However, it's only a matter of time before diagnosed cases appear in North America. We are fortunate. We have public health and medical care systems that are equipped to handle and isolate cases. And for now, there is no significant risk of EVD exposure in the U.S.

Nonetheless, nurses and other healthcare workers must have the protections they need to support patients when EVD comes to our shores. Hospitals and healthcare facilities should have infection control practices and personal protective equipment (PPE) in place to keep healthcare workers safe—as mandated in the Occupational Safety and Health Administration bloodborne pathogens standard and other CDC infection control guidance.

This fact sheet will provide an overview of Ebola viral disease and methods to protect potentially exposed healthcare workers.

What is EVD?

Ebola hemorrhagic fever (Ebola HF) is one of numerous viral hemorrhagic fevers. It is a severe,

often fatal, disease in humans and nonhuman primates (such as monkeys, gorillas and chimpanzees).

When infection occurs, symptoms usually begin abruptly.

Researchers believe the virus is animal-borne, with bats being the most likely reservoir.

The symptoms include:

- High fever (101.5 degrees Fahrenheit or above);
- Severe headache;
- Muscle pain;
- Vomiting;
- Diarrhea, abdominal pain; and
- Unexplained hemorrhage.

Within a 21-day period preceding the onset of symptoms, a person either will have:

- Had contact with blood or other body fluids or human remains of a patient known or suspected to have EVD;
- Resided in, or traveled to, an area where EVD transmission is active (Guinea, Liberia and Sierra Leone are the current epicenters of the outbreak); or
- Directly handled bats, rodents or primates from the outbreak areas.

Symptoms may appear anywhere from two to 21 days after exposure to the Ebola virus, although eight to 10 days is most common. Some people who become sick with Ebola are able to recover, but the mortality rate is very high. Patients who die usually have not developed a significant immune response to the virus. There is currently no treatment for the infection beyond clinical support. Experimental drugs are being considered for use in Africa, and a vaccine may be ready for clinical trial in the coming months.

How is EVD transmitted, and what are potential exposures for healthcare workers?

The incubation period of the infection is usually eight to 10 days (rarely ranging from two to 21 days). Patients can transmit the virus while symptomatic and through later stages of the disease, as well as postmortem. EVD is spread through direct contact (via broken skin or mucous membranes) with:

- A sick person's blood or body fluids (urine, saliva, feces, vomit and semen);
- Objects (such as needles) that have been contaminated with infected body fluids; and
- Infected animals.

Healthcare workers may be exposed to the virus while caring for an EVD-infected patient through:

- Percutaneous (e.g., through a needlestick or mucous membrane) exposure to body fluids;
- Aerosolized blood and body fluid;
- Exposure to patient's body fluids without appropriate personal protective equipment;
- Processing laboratory specimens of body fluids of confirmed EVD patients without appropriate PPE or standard biosafety precautions; and
- Direct exposure (without appropriate PPE) to human remains in the geographic area where outbreak is occurring.

What should be in place to protect healthcare workers?

Each healthcare setting should have a comprehensive program to protect workers and patients from exposures to infectious diseases. The CDC recommends that healthcare workers potentially exposed to the Ebola virus follow standard contact and droplet precautions to prevent transmission in a hospital setting. All hospitals should also be in compliance with

the OSHA bloodborne pathogens standard and provide the appropriate training, equipment (safety devices for syringes, etc.) and PPE for direct care personnel, healthcare professionals, and laboratory technologists and technicians. Intensive training will be essential in the event of EVD exposure in the U.S. Workers should understand the signs and symptoms of EVD as well as isolation procedures and protocols for managing suspected cases. Airborne infection isolation rooms (AIIR) should be available if there is any potential for aerosolizing body fluids or blood. Workers should also understand the appropriate disinfection* procedures to eradicate the virus on all surfaces and equipment.

Nurses and healthcare workers will need ample supplies of personal protective equipment, including:

- Gloves;
- Gowns (fluid resistant or impermeable);
- Eye protection (goggles or face shield);
- N95 respirators at a minimum. More-protective respirators such as powered air purifying respirators (PAPRs) may be needed if procedures that could generate aerosols of blood or other body fluids are performed.

Additional PPE such as double gloves, leggings and disposable shoe covers might be required in certain situations (e.g., copious amounts of blood, other body fluids, vomit or feces present in the environment). Training for donning and doffing personal protective equipment will be essential so that healthcare workers don't come in contact with contaminated PPE.

The AFT Nurses and Health Professionals division will continue to monitor the epidemic in Africa and any potential risk to U.S. healthcare workers. If you want more information, please contact healthandsafety@aft.org.

* As much as possible, healthcare facilities should use EPA-approved disinfectants that are not associated with causing work-related asthma or trigger existing asthma. An example of a disinfectant that should be used sparingly or not at all is sodium hypochlorite (bleach).