

# Practice ALERT

NEW YORK STATE NURSES ASSOCIATION

## **EBOLA VIRUS WHAT NURSES NEED TO KNOW**

Ebola virus disease (EVD) is a severe, often fatal illness that can have a fatality rate of 60-90%.

Ebola outbreaks have occurred primarily in remote areas in Central and West Africa near tropical rain forests.

The virus is transmitted from wild animals to people and then spreads through human-to-human contact through contact with bodily fluids including blood, saliva, sputum, vomit, feces, urine and sweat.

There are no licensed specific treatments or a vaccine available for treatment of EVD.

### **Signs and Symptoms**

The incubation period is 2 to 21 days. Symptoms may include:

- Fever
- Headache, sore throat and muscle pain
- Intense weakness
- Nausea and vomiting
- Diarrhea (may be bloody)
- Chest pain and cough
- Rash
- Impaired kidney and liver function
- In some cases internal and external bleeding

### **Treatment**

Standard treatment for Ebola is limited to supportive therapy including:

- Balancing the patient's fluids and electrolytes
- Maintaining the patient's oxygen status and blood pressure
- Treating the patient for any complicating infections

# Practice ALERT

NEW YORK STATE NURSES ASSOCIATION

## EBOLA VIRUS WHAT NURSES NEED TO KNOW

### Transmission

Ebola is typically transmitted from human-to-human by direct contact with the blood or secretions of an infected person or exposure to objects that have been contaminated with infected secretions. An infected patient cannot transmit the disease until symptoms manifest. The CDC has opined that airborne transmission is possible during procedures that may generate airborne particles, although there are currently no epidemiological studies in humans to support this opinion. EVD can be transmitted postmortem.

### Suspected Cases

A suspected case is determined using the following criteria:

- fever of greater than 38.6 degrees Celsius or 101.5 degrees Fahrenheit;
- AND additional symptoms such as severe headache, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained hemorrhage;
- AND, within the past 3 weeks before the onset of symptoms:
  - 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;
  - or direct handling of bats, rodents, or primates from disease-endemic areas.Malaria diagnostics should also be a part of initial testing because it is a common cause of febrile illness in persons with a travel history to the affected countries.

### Confirmed Case

A confirmed case is a suspected case with laboratory-confirmed diagnostic evidence of Ebola virus infection.

### Worker Protection

It is not always possible to identify a patient with EVD immediately because early symptoms may be non-specific. Therefore, it is important that health care workers (HCWs) use standard precautions consistently with all patients and in all work practices. This includes:

# Practice ALERT

NEW YORK STATE NURSES ASSOCIATION

## EBOLA VIRUS WHAT NURSES NEED TO KNOW

- Hand hygiene
- Respiratory hygiene
- Personal protective equipment (to limit contact with infected materials and splashes)

HCWs caring for patients with suspected or confirmed Ebola virus should, in addition, follow these precautions:

- Use barrier precautions including gloves, face shields or goggles with side shield and masks, long sleeved gowns. For more information on proper donning and doffing procedures, [click here](#).
- If there may be contact with blood, vomit, feces or body secretions, plastic aprons, leg and shoe coverings may also be needed. If contaminated these materials should be discarded.
- Use infection-control measures (complete equipment sterilization, use of disinfectant, etc.).
- Isolate Ebola-infected patients from contact with unprotected persons.
- Although transmission by the airborne route has not been established, the CDC recommends that, if a HCW comes in contact with a patient with severe pulmonary involvement and/or aerosolizing procedures are being conducted, airborne precautions should be followed. In this situation, NYSNA recommends use of an elastomeric half or full-face respirator with HEPA filter or a half or full-face PAPR with a HEPA filter.

For the CDC's infection prevention and control recommendations for hospitalized patients with known or suspected EVD, please [click here](#).

### Management of Exposure

HCWs with percutaneous or mucocutaneous exposures to blood, body fluids, secretions or excretions from a patient with suspected EVD should take the following precautions:

- Immediately wash the affected skin surfaces with soap and water.
- Mucous membranes should be irrigated with copious amounts of water or eyewash solution.

- Exposed persons should receive medical evaluation and follow-up care, including fever monitoring 2X daily for 21 days after exposure.
- If a fever develops within 21 days of exposure, consult with an infectious disease expert.

**Protocol for Patient Management**

Early identification of patients with risk factors for EVD is essential. For a sample hospital protocol for management of patients with suspected EVD, please [click here](#).