

Reason / Problem UpToDate

Ebola Virus Disease Evaluation Order Set

- Patients with Ebola virus disease usually have an abrupt onset of non-specific symptoms and signs, such as fever, malaise, headache, and myalgias. As the illness progresses, vomiting and diarrhea may develop, often leading to significant fluid loss. Patients with worsening disease display hypotension and electrolyte imbalances leading to shock and multiorgan failure, sometimes accompanied by hemorrhage.
- The 2014-2015 West African epidemic is the largest filovirus outbreak on record. It started in the nation of Guinea in late 2013 and was confirmed by the World Health Organization in March 2014. The countries with widespread transmission include Guinea, Liberia, and Sierra Leone.
- The approach to evaluating patients with possible Ebola virus disease depends upon whether or not the individual displays appropriate signs and symptoms, how likely it is that the exposure will result in disease (ie, the level of risk), and when the exposure occurred.
- During the 2014-2015 Ebola epidemic, clinicians worldwide should evaluate patients to determine if they have clinical findings consistent with the disease (ie, fever and/or severe headache, weakness, muscle pain, vomiting, diarrhea, abdominal pain, or unexplained hemorrhage) and obtain a careful history to determine if they have had a possible exposure to Ebola virus within 21 days prior to the onset of symptoms.
- When caring for patients with confirmed or suspected Ebola virus disease, health care personnel should follow infection prevention and control recommendations from the United States Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO). Recommendations include isolation of hospitalized patients with known or suspected Ebola virus disease; proper hand hygiene; the use of standard, contact, and droplet precautions; and the correct use of appropriate personal protective equipment (PPE).

Ebola Virus Disease UpToDate

Admit / Transfer UpToDate UpToDate

Admit inpatient STAT to a private room, isolation precautions: contact, droplet and full barrier

Transfer to a private room , Isolation precautions: contact, droplet and full barrier

Condition

Good

Fair

Serious

Critical

Code Status:

Full code

Do not resuscitate

Activity UpToDate

- The Center for Disease Control (CDC) and the World Health Organization (WHO) have issued detailed guidelines on the use of PPE for managing patients with suspected or confirmed Ebola virus disease. Highlights from these guidelines include the following: rigorous and repeated training of healthcare workers in correct donning and doffing of PPE; the type of PPE used by healthcare workers should cover all skin. Such PPE includes double gloves, boot covers, fluid-resistant gowns or coveralls, single-use disposable hoods that cover the head and neck, single-use disposable full face shields, and PAPR or N95 respirators. Additional measures, such as waterproof aprons, may also be required, depending upon the patient's symptoms. The combination of PPE used should be determined by the healthcare facility providing care; healthcare workers should perform frequent disinfection of gloved hands using an alcohol-based hand rub, particularly after touching body fluids. In addition, they should immediately disinfect any visibly contaminated PPE using approved disinfectant wipes; and a trained monitor should actively observe and supervise each worker donning and doffing PPE.
- The Centers for Disease Control and Prevention (CDC) recommends that mothers under investigation or with Ebola virus disease avoid close contact (including breastfeeding) with their infants if there are alternative ways for their infants to receive adequate care and nutrition. (UpToDate)

Door to patient's room must be kept closed at all times

All personnel entering patient's room must sign log

Patient restricted to room

Diet

Nothing by mouth

Regular diet

Vital Signs

Check vital signs

Check vital signs per protocol

IV UpToDate UpToDate UpToDate

- The mainstay of treatment for Ebola virus disease involves supportive care to maintain adequate cardiovascular function while the immune system mobilizes an immune response to eliminate the infection. (UpToDate)
- The most important aspects of supportive care involve preventing intravascular volume depletion, correcting profound electrolyte abnormalities, and avoiding the complications of shock.

Crystalloid:

Lactated Ringer's intravenously _____ and
Normal saline intravenously _____ and
5% dextrose in half-normal saline intravenously _____ and

Crystalloid-Fluid Bolus:

Normal saline intravenous bolus
Lactated Ringer's intravenous bolus

Blood Products:

Packed red blood cells intravenously

Lock IV:

Saline lock intravenous

Parenteral Nutrition:

Total parenteral nutrition intravenously per order form

Other Nursing UpToDate UpToDate**Assessments:**

Complete adult admission assessment
Obtain weight
Complete adult pain assessment

Cardiac:

Continuous bedside cardiac monitoring

Fluid Balance:

Intake and output _____ and then
Electrolyte replacement protocol *Potassium, Calcium, Sodium and/or Magnesium replacement protocols*

Respiratory:

Monitor pulse oximetry continuously

Precautions:

Contact precautions
Droplet precautions
Full barrier precautions

Circulatory:

Central venous line care per protocol
Peripheral IV line care per protocol
Insert peripheral IV line
PICC line care per protocol

Urinary:

Catheter care per protocol
Insert catheter _____ and then
Monitor urine output

Therapies**Procedures:**

_____ central venous catheter
_____ Peripherally inserted central catheter

Oxygen:

Warmed, oxygen

Medications UpToDate

Antibacterial Agents:

- Ciprofloxacin 400 mg intravenously every 12 hours
- Azithromycin 500 mg intravenously every 24 hours
- cefTRIAxone sodium 2 grams intravenously every 12 hours
- Meropenem 1 gram intravenously every 8 hours
- Vancomycin HCl 1 gram intravenously every 12 hours

Electrolytes:

- *Patients may develop significant electrolyte disturbances (eg, hyponatremia, hypokalemia, hypomagnesemia, and hypocalcemia) and may require frequent repletion of electrolytes to prevent cardiac arrhythmias.*

Magnesium sulfate 2 grams intravenously single dose as needed for hypomagnesemia *Follow magnesium replacement protocol.*

Potassium chloride 10 mEq intravenously every 60 minutes (not to exceed 200 mEq in 24 hours)

Sodium phosphate 15 mmol (based on phosphate) intravenously single dose

Laboratory UpToDate UpToDate

- *Evaluation of all patients with suspected Ebola virus disease should be done in conjunction with local and state health departments. Testing for Ebola virus infection is performed in symptomatic patients with any possible risk of exposure to Ebola virus (high, some, or low risk). Testing is not warranted for patients who have an identifiable risk but no signs or symptoms of Ebola virus disease. These patients should be monitored and tested if they become ill. Testing is not warranted for patients without any identifiable risk of exposure to Ebola virus.*
- *Patients with Ebola virus disease typically develop leukopenia, thrombocytopenia, and serum transaminase elevations, as well as renal and coagulation abnormalities. Other laboratory findings include a marked decrease in serum albumin and elevated amylase levels.*
- *The differential diagnosis will vary markedly with the clinical and epidemiologic circumstances. As an example, travelers returning from West or Central Africa should be evaluated for illnesses commonly seen in those areas, such as malaria.*
- *In patients who are suspected of having Ebola virus disease, phlebotomy and laboratory testing should be limited to tests that are essential for diagnosing or ruling out Ebola virus and/or emergency care.*

Virology: UpToDate

- *Most acute infections are diagnosed through the use of RT-PCR. Viral RNA is generally detectable by RT-PCR within three days after the onset of symptoms. Repeat testing may be needed for patients with symptoms for fewer than three days duration.*
- *Specimens ideally should be taken when a symptomatic patient reports to a healthcare facility and is suspected of having an Ebola exposure. However, if the onset of symptoms is less than 3 days, a later specimen may be needed to completely rule out Ebola virus, if the first specimen tests negative.*

Ebola virus antigen by immunoassay (whole blood)

Chemistry:

Comprehensive metabolic panel (serum)

Hematology:

CBC with differential (whole blood)

Other Tests:

Influenza A rapid antigen test (nasopharyngeal swab)

Malaria examination (Giemsa) (blood thick and thin smears)

Malaria antigen by rapid immunoassay (blood) *All positive rapid detection tests should be followed by microscopy.*

Routine culture and sensitivities 2 sets (blood)

Consultations

Infectious Disease consultation today

Notify public health authority today
