Screening and Triage

At registration on the initial intake form, the patient will be asked to circle yes or no in response to the following question: “Have you traveled to anywhere in West Africa, including Guinea, Sierra Leone, Liberia, or Nigeria in the last 30 days?” Additionally they will be asked, “Have you come in contact with anyone known to have the Ebola virus in the last 30 days?”.

If the patient circles “yes” in response to either one of those questions, the staff at registration will immediately notify the OB ED RN of this. This notification will occur before any further registration forms or questions have been completed.

The OB ED RN will immediately put a mask on and take a mask to the waiting room for the patient to place on herself. The RN will take the patient and any waiting family members to the AOD rooms without having any physical contact. The family will be placed in Room 3 with the doors closed. The patient will be taken to Room 1. The doors should be physically closed to the bathroom and the hallway. This particular room was chosen because it is the furthest from the other OB ED rooms and furthest from the main flow of traffic to limit exposures.

The RN should put on double gloves and ask the patient the following questions without coming into direct contact with the patient: (NO TOUCH)

1. Do you have a fever greater than 101.5 degrees F or 38.6 degrees Celsius?
2. Do you have a severe headache?
3. Have you been vomiting?
4. Have you had diarrhea?
5. Have you had unexplained hemorrhage?
6. Have you had muscle pain or abdominal pain?

IF the answer is NO to ALL of these questions, the patient and family may return to the waiting room or into an OB ED room as directed by usual practice.

If any of the answer to ANY of the above questions is yes:
1. The RN should go into the ante room (Room 2) and place all personal protective equipment on. This includes double gloves, impermeable gown, surgical boots, and a mask with a shield.
2. The AC should be notified immediately. The AC will initiate the Hospital Ebola Response Team.
3. The patient’s room should only be accessed via the ante room leading into the bathroom.
4. The bathroom door and the door from the hallway to the ante room should remain closed unless the appropriate staff are entering and exiting.
5. The patient may not have any visitors.
6. The staff entering and exiting the patient room should be limited to the Primary RN and appropriate physician(s). The door from the hallway to the patient's room should never be opened once the patient is inside.

7. This RN becomes 1:1 with the patient until further notice (Primary RN)

8. The L and D charge RN should also be notified. This Primary RN will need a "buddy" RN to assist her.

9. These two nurses should not have any other patient assignments.

10. No ancillary staff, such as housekeeping or food services, should enter the patient room.

The “buddy” RN should:

1. Bring fetal monitor from an antepartum room to the ante room (room 2) for the Primary RN to initiate.
2. Bring any laboratory tubes, IV start kits, meds, and other supplies to the ante room as the Primary RN requires
3. Watch carefully as the Primary RN removes all personal protective equipment to ensure that the primary RN does not contaminate herself my touching any open wounds or mucus membranes (eyes, nose, mouth, etc.)
4. Create a log of all family members in isolation, any one in the waiting room, staff, etc. that may have been in contact with the patient. This log should include a name, role, and contact phone.
5. Relieve the Primary RN if needed for bathroom breaks, etc.
6. Always double glove when entering the ante room. Try not to touch any possibly contaminated surfaces.

When the AC is notified, the designated Hospital Ebola Response Team will then give instructions on what to do next.

1. The Response Team will instruct the RN on what labs should be drawn, etc.
2. ANY Labs drawn SHOULD NOT be sent to the xxx Hospital Laboratory. If any specimens were taken out of the patient’s room, notify the receiving department of the patient status immediately and these labs will likely be disposed of.

All equipment used in the room should STAY in the room. Do not dispose of any equipment or supplies outside the patient's room or anteroom. All bodily fluids should stay within the patient room. Anything disposed of (equipment or bodily fluids) should be disposed of in red biohazard bags and stay inside the room. This includes all personal protective equipment worn by staff.

When a staff member in personal protective equipment leaves the patient room:
1. Their protection should be removed under the supervision of a buddy to ensure no self-contamination by touching any open wounds or mucous membranes, such as the nose, mouth, or eyes.
2. Proper hand hygiene should be performed immediately. Wash hands between each removal stage.
3. The staff member then should take a shower and change clothes.

If a test for the Ebola virus is required, the Hospital Ebola Response Team will provide instructions on how to do this blood test.
1. The specimen will be sent STAT to xxx Medical Center.
2. The turn around time is 5 hours.
3. SHOULD THE TEST BE POSITIVE, a higher level of personal protective equipment will be provided as instructed by the Hospital Ebola Response Team.
4. The patient will then be transferred to xxx Medical Center.

If the patient needs to be delivered imminently before testing clears the patient of isolation requirements:
1. The Patient should be delivered in ROOM 1 for a vaginal delivery
2. Only required staff should be in the room (Primary RN, RN for baby, and Physician), and all should be in personal protective equipment.
3. A small delivery table will be provided.
4. The baby MUST be taken through the bathroom to the connecting room where there should be a Baby Warming Table. The baby MUST be isolated from mother immediately. Dry baby off taking care not to rub bodily fluids into mouth/eyes/nose, if possible.
5. Baby MUST remain in isolation in this connecting room. Do not transport baby to the nursery or NICU. The baby will then require a Primary RN who will remain 1:1.
6. For a c-section, the initial attempt would be to perform a c-section in the patient isolation room. If this is absolutely not feasible, the patient would need to be transported to the South OR. DO NOT use L and D ORs. The patient would likely require general anesthesia. Again, only absolutely necessary staff should be present.
7. IF delivery is not immediately required, wait until confirmatory Ebola testing is performed.

In the United States, a patient with Ebola virus or suspected Ebola virus should not breastfeed her baby. Ebola virus is present in breastmilk.

Note: The isolation rooms may change in the near future to the old ENDO rooms. The patient being questioned would not enter through the OB ED at all but go through the double doors to the back hallway. There are two rooms connected by and anteroom. The patient will be isolated in ROOM 1, with the baby (if needed in ROOM 2). The staff would enter and exit through
the ante room only and all doors shall remain closed at all times. No one should enter / exit through the doors directly from ROOM 1 or 2 into the hallway. The family should be taken by the “buddy” RN to an AOD room where the doors must be closed to isolate them.
CHECK LIST OF EQUIPMENT:

For the Patient Room:

1. stretcher with stirrups.
2. Equipment cart containing:
   - disposable BP cuffs of various sizes
   - temp-a-dot disposable thermometers,
   - Nitrile gloves (small, medium, and large)
   - disposable stethoscope
   - bleach wipes
   - red biohazard bags
   - IV start kit,
   - rainbow of tubes,
   - monitor paper,
   - gel for monitors,
   - gel for checking patient,
   - multiple size sterile gloves,
   - monitor bands,
3. Hand sanitizer
4. Soap dispensers have soap (in bathroom or anteroom)
5. Red biohazard bags with trash can with foot pedal
6. Working wall clock
7. Ensure call bells work and intercom calls to desk

Baby ROOM (May be combined with Ante Room in OB ED setup):

1. Baby Warming Table
2. Extra baby blankets
3. See list from nursery on how table is usually stocked
4. Red Biohazard Bags with trash can with foot pedal
5. Gloves (small, medium, large)
6. Ensure call bells works and intercom is directed to desk

ANTE room:

1. Ebola Personal Protective Equipment Cart with (May be stored at OBED entrance until a patient arrives. Then store in Ante Room):
   - Nitrile gloves (small, medium, and large)
   - XLarge surgical gowns (multiple)
   - surgical boots
   - masks with face shields that curve around side
   - Sterile gloves of various sizes
   - OR hats
2. Delivery cart – Should be on a cart similar in size to the Protective Equipment cart, not the large delivery car
   - Precip tray
   - Needle driver
   - Suture: 5 2-0 vicryl on CT 1, and 3 3-0 vicryl on SH
- Needles for injecting local
- Specimen cups for dispensing lidocaine
- 2 of the 20 cc syringes
- 5 plastic clamps for umbilical cord
- Under buttocks drape – 2
- Multiple sizes sterile gloves
- Bucket for placenta

3. Red Biohazard bags and trash can with foot pedal
4. Soap dispenser full of soap
5. Hand Sanitizer
Dear Physician,

We wanted to inform all of the physicians on our staff about the xxx Hospital’s plan for triaging a patient with suspected Ebola virus. We have created a protocol to ensure the safety of all of our staff and patients. You can greatly assist us in protecting everyone by following the guidelines below.

If your patient calls you or presents to your office with fever (greater than 100.5 degrees f or 38.6 degrees c) please ask the patient the following question: Have you traveled to West Africa, including Liberia, Sierra Leone, Guinea, or Nigeria) in the last 30 days or come into contact with a person known to have the Ebola virus in the last 30 days?”

If the answer is “yes” please immediately isolate the patient in contact and droplet isolation by placing them in a single room with the door to the hallway closed. Limit all contact with the patient and use personal protective equipment such as double gloves, masks with shields, and impermeable gowns if you must contact the patient. Immediately contact the AC at the hospital (281-737-4747) and transfer the patient to the MAIN EMERGENCY ROOM unless otherwise directed by the AC. Cease all lab testing, sequester all previously drawn specimens, and notify the lab if any specimens were sent. Please do not send the patient, even if she is pregnant, to the OB ED.

Within the hospital in both the Main Emergency Room and in the OB ED, we have prepared an isolation room and discussed the protocol to follow with our staff. There is a Hospital Ebola Response Team that will be initiated by AC. The patient will be cared for at xxx Hospital until confirmatory testing is obtained. If the patient tests positive for the Ebola virus (or the patient is deemed to be high-risk and symptomatic by the Ebola Response Team), the patient will be transferred to Houston Methodist Hospital Medical Center. The turn around time for this test is estimated to be 5 hours. We are prepared to do a delivery in the Main ED, if necessary.

If you should need any assistance or have any further questions, please contact Pam Sprague, Director of Women’s Services.

Thank you for your vigilance. While we hope we will never need these recommendations, we want to make sure they are in place to protect all staff and patients at risk.

Sincerely,
EBOLA VIRUS QUICK FACTS

The Ebola virus was first identified around 1976 in the Democratic Republic of Congo. It was named after a small river there. There have been multiple outbreaks since, but the current outbreak in West Africa has by far been the most widespread. It has also been called Ebola Hemorrhagic Fever, but many patients in the current outbreak do not have hemorrhage.

The signs and symptoms of Ebola include fever (greater than 38.6 degrees C or 101.5 degrees F) AND at least one of the following:

1. Severe headache
2. Muscle Pain
3. Vomiting
4. Diarrhea (may be bloody)
5. Abdominal Pain

OR unexplained hemorrhage with or without fever

Other symptoms may include conjunctivitis, hiccups, diffuse erythematous maculopapular rash, seizures, loss of consciousness, petechiae, unexplained bruising, oozing from venipuncture sites, mucosal hemorrhage, genital bleeding, multi-organ failure, hypotension, impaired steroid synthesis, and septic shock.

People at risk are those who have one of the following in the 30 days before symptoms started:

1. Contact with bodily fluids (blood, urine, feces, sweat, breastfeeding, etc) of a person with the Ebola virus or the remains of a person with the virus who has died
2. Lives in or travelled to West Africa including Guinea, Sierra Leone, Liberia, or Nigeria
3. Directly contacted bats or primates from the above areas

Generally mild symptoms present 6-10 days after exposure to the virus. The initial symptoms are very mild and may mimic other viral illnesses. It then progresses to progressively more severe symptoms including multi-organ failure.

The incubation period from time of exposure to initial onset of mild symptoms may be as long as 21 days.

The Ebola virus is transmitted through direct contact between a break in the skin or mucus membranes with bodily fluids (blood, urine, sweat, breastfeeding, vomit and feces) of a person infected with the virus. There is no information on amniotic fluid specifically.

Dead bodies of people who died of the virus are highly contagious. The virus can be transmitted to humans from bats and other non-human primates.
Contact and droplet precautions should protect transmission of the virus. The CDC recommends that staff in the US should wear double gloves, an impermeable gown, surgical shoe covers with or without leg covering, and a mask with a shield. In West Africa a higher level of protection for medical staff is recommended because they are working in conditions such as lack of running water and basic necessities for hours on end. In addition, they may be required to handle the bodies of the deceased or contaminated linens and equipment. Although the CDC states that the usual contact and droplet precautions should prevent the transmission of the Ebola virus, if a patient tests positive for the virus, all staff in contact with the patient at Houston Methodist Hospitals shall wear a higher level of personal protective equipment.

There are no known proven treatments or vaccines. The main treatment is supportive therapy including IV fluids, blood transfusions, and treatment of hypotension.

Laboratory data may seem to mimic pre-eclampsia. AST and ALT are increased with AST greater than ALT. Platelets are usually between 50,000 and 100,000. Signs of renal failure may be present. PT, PTT, and Fibrinogen may be elevated. Leukocytosis is generally present and often develops a left-shift. Amylase may also be elevated.

In West Africa the disease is fatal in 60-90% of cases. This is thought to be from the lack of medical supplies to provide supportive therapy.

The rampant spread in West Africa is thought to be multifactorial. There are not enough medical supplies or medical staff to care for patients with the virus. Basic necessities, such as running water to wash hands, are often lacking. Fear and distrust of the political elite has prevented many victims from seeking help from hospitals or clinics. Fear of contracting the virus has also left many clinics and hospitals with limited staff or without any staff. In addition, cultural procedures for preparing dead bodies for burial have exposed many people.

Women in West Africa are at higher risk for contracting the Ebola virus than men. This may be due to gender roles because women generally are the primary caregivers in the family. They are often the ones who care for the sick and prepare dead bodies for burial. In addition, most nurses and midwives are women. It is suspected that pregnancy also places women at higher risk because of a slightly impaired immune system and higher incidence of exposure to bodily fluids while in the hospital. The virus does appear to be more deadly in pregnant women than in males.

The majority of pregnancies in women with the Ebola virus end in spontaneous abortions. There have been cases of women delivering liveborn infants, but in these cases all of the mothers died and all of the babies died of the virus during the neonatal period. It is unclear if the babies contracted the Ebola virus during the
pregnancy itself, the actual birth, contact with the mother postpartum, or through breastmilk. The virus has been isolated in breastmilk. It is unclear if immediate separation of the baby from the mother at birth will prevent transmission of the virus to the baby.

The first person identified in Sierra Leone to be cured of the Ebola virus in this current outbreak was a pregnant woman. Her gestational age at the time of the illness and the outcome of her pregnancy are unknown.

The early symptoms of the Ebola virus may mimic other illness, such as malaria, which are more common. Even a septic spontaneous miscarriage with hemorrhage may present with similar symptoms.

More patients have contracted and died from Enterovirus d68 in the United States than the Ebola virus. More people, including pregnant women, will likely die from the influenza virus this flu season than will die of the Ebola virus in the United States. Always use universal precautions and good hand hygiene.