

Guidance for Screening and Caring for Pregnant Women with Ebola Virus Disease for Healthcare Providers in U.S. Hospitals



Department of Health and Human Services
Centers for Disease Control and Prevention

Purpose

- **Who is this guidance for?**

Healthcare providers working in emergency departments and labor and delivery units in U.S. hospitals

- **What is this guidance for?**

How to screen pregnant women for Ebola virus disease (Ebola) and how to care for pregnant women with known or suspected Ebola, including considerations for pregnant healthcare workers

- **How should this guidance be used?**

To help U.S. hospitals develop a plan for screening and treating pregnant women with known or suspected Ebola

Background

- No current evidence that pregnant women are more susceptible to infection with Ebola than the general population
- Limited evidence that pregnant women are at increased risk of severe illness and death from Ebola
- Pregnant women with Ebola at increased risk of fetal loss and pregnancy-associated hemorrhage
- In previous outbreaks in Africa, infants born to mothers with Ebola have not survived

How to Screen Pregnant Women at Hospitals

- Healthcare providers caring for pregnant women in U.S. hospitals should be prepared to screen patients for Ebola and have a plan for triaging these patients
- US healthcare providers caring pregnant women should
 - Know signs and symptoms of Ebola
 - Ask patients about recent travel to countries with widespread Ebola transmission or contact with a person with Ebola. CDC website: <http://www.cdc.gov/vhf/ebola/index.html>
 - Assess patients with recent travel to a country with widespread Ebola transmission or contact with a person with Ebola for fever and other signs and symptoms of Ebola

How to Screen Pregnant Women at Hospitals

- Ask all pregnant women who arrive at a hospital for medical care about travel from countries with widespread Ebola transmission or contact with a person with Ebola within past 21 days
- Pregnant women with a travel or exposure history within the past 21 days should be screened for fever and symptoms of Ebola
- Women with signs or symptoms of Ebola
 - Should be immediately isolated
 - Appropriate personal protective equipment (PPE) should be worn by all healthcare workers in physical contact with the patient
 - Hospital should activate its preparedness plan for Ebola, including notifying the local or state health department
- Decisions about PPE while triaging the patient should be based on *CDC's Identify, isolate, inform: emergency department evaluation and management of patients with possible Ebola virus disease*
 - <http://www.cdc.gov/vhf/ebola/hcp/ed-management-patients-possible-ebola.html>

How to Screen Pregnant Women at Hospitals

- Recent travel history, but no fever or symptoms of Ebola:
 - Assessed for other epidemiologic risk factors
 - Ascertain exposure risk <http://www.cdc.gov/vhf/ebola/exposure/risk-factors-when-evaluating-person-for-exposure.html>
 - Determine whether movements should be restricted based on potential exposure: <http://www.cdc.gov/vhf/ebola/exposure/monitoring-and-movement-of-persons-with-exposure.html>
- Asymptomatic with no other epidemiologic risk factors:
 - Routine obstetric care
- Obstetric care for women with risk factors and movement restrictions should be determined on a case-by-case basis in consultation with public health authorities

How to Treat Pregnant Women Diagnosed with Ebola

- The general medical management should be the same as for any other adult with Ebola
- Obstetric management – focus on monitoring and early treatment of hemorrhagic complications
- Spontaneous abortion and intrapartum hemorrhage common among women with Ebola
- High perinatal mortality rates reported among infants of women infected with the Ebola virus

Restrictions for Pregnant Healthcare Workers

- Pregnant healthcare workers should not provide care for Ebola patients because of the likely increased maternal and fetal risks
- Recommended PPE for care of patients with Ebola may be particularly restrictive and uncomfortable for pregnant healthcare workers

Infection Control Procedures for Labor and Delivery Units

- Pregnant women with known or suspected Ebola should be hospitalized
- CDC guidance for hospitalized patients with known or suspected Ebola should be followed
 - <http://www.cdc.gov/vhf/ebola/hcp/caring-for-ebola-suspects.html>
- PPE recommendations for healthcare workers caring for pregnant Ebola patients same as those caring for nonpregnant patients with known or suspected Ebola
 - <http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>
- Training, practice use, and demonstrated competency with PPE is critical for protecting all healthcare workers against transmission of Ebola

Method of Delivery

- No data on preferred method of delivery for pregnant Ebola patients (maternal, neonatal outcomes; healthcare worker safety)
- Existing literature – small case series in Africa; details sparse
- High risk of spontaneous fetal loss
- No known neonatal survivals
 - Causes of neonatal death unclear
 - ? transplacental viral passage
 - ? viral transmission through direct contact
 - ? other causes
- No data on obstetric outcomes from settings with highly developed healthcare systems.

Method of Delivery – Issues to Consider

- Likelihood of exposure to large amounts of blood and body fluids regardless of vaginal or cesarean delivery
- Overall physical condition of patient, particularly the presence of coagulopathy
- Likelihood of neonatal survival, especially at early gestational ages
- Effectiveness of interventions that result in delivery for the purpose of improving maternal outcomes in patients with Ebola is unknown

Visitors for Laboring Patients with Ebola

- Restrict visitation for laboring patients with Ebola
- Consider exceptions on case-by-case basis, after careful consideration of risks and benefits
 - Father of the baby
 - Other support person
- Hospitals should develop procedures for monitoring, managing, and training visitors
- Visits should be scheduled and controlled
<http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html>
- Consider videoconferencing instead of in-person visitation

Visitors for Laboring Patients with Ebola

- Evaluate risk exposure, and monitor according to risk category
- Visitors could have the same or similar risk factors for Ebola as laboring patient
- Screen visitor before entering the patient area
- No direct contact with the patient by the visitor
- Train visitor to safely put on, wear, and take off same type of PPE recommended for healthcare workers
- Observe visitor at all times, including while taking off PPE, which must be done properly to prevent or reduce the risk of infection

Breastfeeding Considerations

- Ebola virus has been detected in samples of breast milk
- No data about timing of appearance or clearance of virus in breast milk
- Women with Ebola should not breastfeed
- Women with low (but not zero) risk based on epidemiologic risk factors (see below) should be advised of the benefits of early initiation of breastfeeding:
 - No signs or symptoms of Ebola
 - Recent travel (within the last 21 days) from countries with widespread Ebola transmission
 - No known exposures to Ebola

Key Points for Providers Caring for Pregnant Women

- Be prepared to screen patients for Ebola and have a plan in place to triage these patients
- Consider risks to woman and healthcare providers and potential benefits to neonate when determining obstetric management of pregnant women with Ebola, particularly decisions about mode of delivery
- Healthcare workers who are pregnant should not care for patients with Ebola
- Pregnant women with known or suspected Ebola should be hospitalized, and CDC guidance for hospitalized patients with known or suspected Ebola should be followed

References and Resources

Mupapa K, Mukundu W, Bwaka MA, et al. Ebola hemorrhagic fever and pregnancy. *J Infect Dis* 1999;179(suppl 1):S11-S12.

Jamieson DJ, Uyeki TM, Callaghan WM, Meaney-Delman D, Rasmussen SA. What obstetrician-gynecologist should know about Ebola: a perspective from the Centers for Disease Control and Prevention. *Obstet Gynecol*. 2014;124(5):1005-1010.

Council on Patient Safety in Women's Health Care. Obstetric Hemorrhage Patient Safety Bundle:
<http://www.safehealthcareforeverywoman.org/get-hemorrhage-bundle.php>

World Health Organization. Ebola hemorrhagic fever in Zaire, 1976. *Bull World Health Organ*. 1978;56:271-293.

Bausch DG, Towner JS, Dowell SF, et al. Assessment of the risk of Ebola virus transmission from bodily fluids and fomites. *J Infect Dis* 2007;196 (suppl 2):S142-S147.

CDC's Ebola Website

- Information for Healthcare Workers and Settings: <http://www.cdc.gov/vhf/ebola/hcp/index.html>
- Interim U.S. guidance for monitoring and movement of persons with potential Ebola virus: <http://www.cdc.gov/vhf/ebola/exposure/monitoring-and-movement-of-persons-with-exposure.html>
- 2014 Ebola outbreak in West Africa – case counts: <http://www.cdc.gov/vhf/ebola/outbreaks/2014-west-africa/case-counts.html>
- Signs and symptoms: <http://www.cdc.gov/vhf/ebola/symptoms/index.html>
- When caring for suspect or confirmed patients with Ebola: <http://www.cdc.gov/vhf/ebola/hcp/caring-for-ebola-suspects.html>
- Guidance on personal protective equipment to be used by healthcare workers during management of patients with Ebola virus disease in U.S. hospitals, including procedures for putting on (donning) and removing (doffing): <http://www.cdc.gov/vhf/ebola/hcp/procedures-for-ppe.html>
- Identify, isolate, inform: emergency department evaluation and management of patients with possible Ebola virus disease: <http://www.cdc.gov/vhf/ebola/hcp/ed-management-patients-possible-ebola.html>
- Epidemiologic risk factors to consider when evaluating a person for exposure to Ebola virus: <http://www.cdc.gov/vhf/ebola/exposure/risk-factors-when-evaluating-person-for-exposure.html>
- Infection prevention and control recommendations for hospitalized patients with known or suspected Ebola virus disease in U.S. hospitals: <http://www.cdc.gov/vhf/ebola/hcp/infection-prevention-and-control-recommendations.html>
- Recommendations for breastfeeding/infant feeding in the context of Ebola: <http://www.cdc.gov/vhf/ebola/hcp/recommendations-breastfeeding-infant-feeding-ebola.html>



Thank you

For more information please contact Centers for Disease Control and Prevention

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Visit: www.cdc.gov | Contact CDC at: 1-800-CDC-INFO or www.cdc.gov/info

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



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