

Ebola virus disease in pregnancy: Screening and management of Ebola cases, contacts and survivors

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Purpose

This document provides guidance for the screening, triage, and application of infection prevention and control (IPC) during pregnancy and childbirth care in the context of an outbreak of Ebola virus disease (EVD). Guidance is presented for:

- a. Pregnant women at risk of transmitting Ebola virus to others, e.g.
 - pregnant women with active EVD
 - pregnant women who survive EVD with an ongoing pregnancy
 - pregnant women who are contacts¹ of suspect, probable or confirmed EVD cases
- b. Pregnant women at no increased risk of transmitting Ebola virus to others, e.g.
 - pregnant women with no history of EVD or exposure, but live in or are from an area with ongoing disease transmission
 - women who survive EVD and subsequently become pregnant.

This interim guidance will be updated as additional evidence becomes available. Otherwise, this document will expire 12 months after the date of publication. Guidance on the clinical management of pregnant women with EVD is forthcoming.

**ALL PREGNANT WOMEN, SURVIVORS, THEIR PARTNERS AND FAMILIES
SHOULD BE SHOWN RESPECT, DIGNITY AND COMPASSION**

Background

There is no evidence to show that women who survive EVD and subsequently become pregnant pose a risk for Ebola virus transmission. However, pregnant women with active EVD and pregnant women who survive EVD without pregnancy loss may transmit the virus during delivery and/or management of obstetric complications. Pregnant women who are contacts of confirmed Ebola cases pose a potential risk.

EVD in pregnancy is associated with a high rate of obstetric complications and poor maternal and perinatal outcomes, including spontaneous abortion, prelabour rupture of membranes, preterm labour/preterm birth, antepartum and postpartum haemorrhage, intrauterine fetal death, stillbirth, maternal death and neonatal death. Although rare, some pregnant women with EVD have recovered without loss of pregnancy. Evidence has shown that intrauterine contents remain PCR positive for Ebola virus RNA (1). *There are no reports of survival beyond the neonatal period.*

¹ WHO, 'Case definition recommendations for Ebola or Marburg virus diseases', August 2014. Available online at <http://www.who.int/csr/resources/publications/ebola/case-definition/en/>

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The diagnosis of EVD during pregnancy can be challenging due to overlapping symptoms such as nausea and fatigue, and potentially atypical presentation such as delayed onset of fever (2). Rigorous screening (as described below) for EVD exposure during pregnancy is essential in areas of Ebola virus transmission. Ebola IPC precautions must be stringently applied when providing obstetric care to pregnant women and newborns who are known or suspected to be at risk of EVD transmission.

Screening and triage of pregnant women in the context of an Ebola outbreak

- In areas affected by Ebola, a **careful clinical and epidemiologic history** should be taken from all pregnant women to determine any EVD contact history or EVD signs and symptoms.
- A **higher level of suspicion** for Ebola infection should apply to women with the following **EVD-associated pregnancy complications**:
 - spontaneous abortion
 - prelabour rupture of membranes
 - preterm rupture of membranes
 - preterm labour/preterm birth
 - antepartum or postpartum haemorrhage
 - intrauterine fetal death
 - stillbirth
 - maternal death
 - neonatal death
- **PCR testing for EVD** should be conducted for:
 - pregnant women who meet the EVD case definition;
 - pregnant women with the EVD-associated pregnancy complications listed above;
 - neonates whose mothers had a history of EVD during their pregnancy and/or the above-noted EVD-associated pregnancy complications; or
 - all stillbirths
- During an Ebola outbreak, **screening and triage capacity in healthcare facilities must be strengthened** to identify, manage or refer pregnant women at risk of EVD transmission. Pregnant women should receive appropriate obstetric clinical care while also preventing potential exposure or virus transmission to others.
- **Community health workers and traditional birth attendants** must be made aware of the importance of early referral of pregnant women at risk of EVD to facilities that can provide appropriate obstetric clinical care and Ebola IPC precautions as described below.
- All pregnant women or neonates who die during an Ebola outbreak should have an **oral swab sample** collected for Ebola testing and should have a safe and dignified burial (3).

IPC precautions for pregnant women at risk of EVD transmission during childbirth and complication management

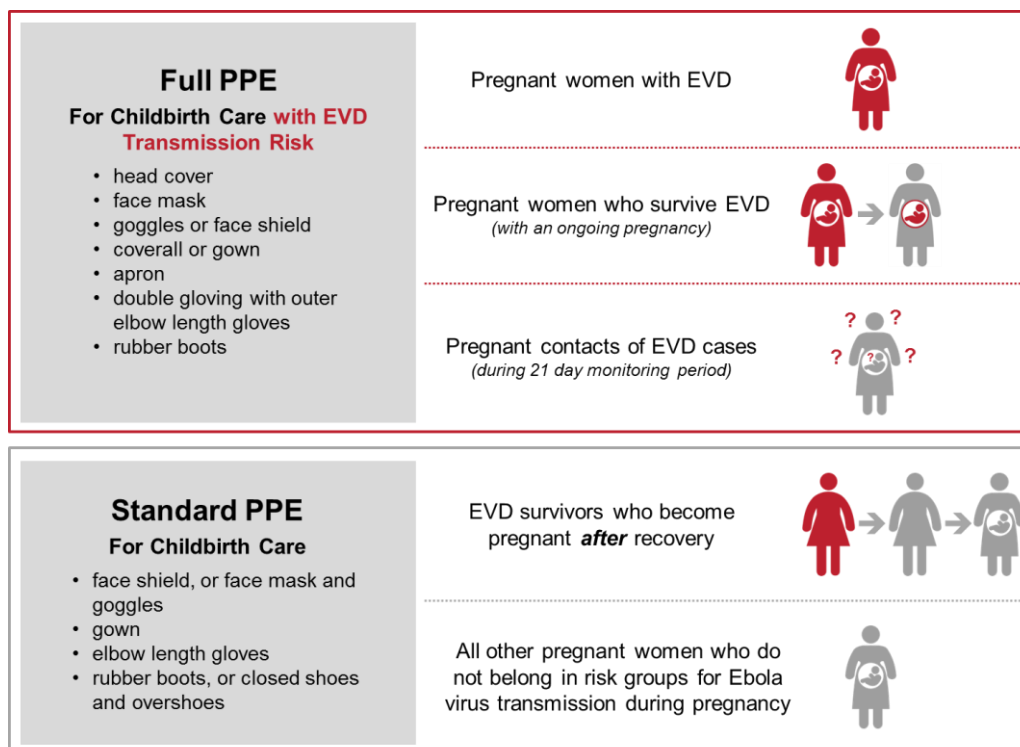
- **Comprehensive Ebola IPC precautions** as recommended for care of EVD cases should be applied in the management of pregnant women and newborns at risk of EVD transmission (4, 5, 6):
 - full personal protective equipment (PPE), including head cover, face mask, goggles or face shield, boots, coverall or gown, apron, double gloving with outer elbow length gloves);
 - rigorous hand hygiene;
 - appropriate waste, sharps and laundry management (*special attention should be given to sharps disposal*)
 - environmental cleaning and decontamination (*special attention should be given to decontamination of reusable instruments*)
- Pregnant women and newborns at risk of EVD transmission should be admitted to the suspected cases area of an Ebola Treatment Center. If this is not possible, they should be separated in isolation rooms

equipped with dedicated toilet or latrine, showers, hand hygiene facilities, stocks of PPE and medicines, good ventilation, screened windows, closed doors and restricted access,

- **If exposure to bodily fluids occurs** while providing care to an at-risk pregnant woman or newborn, trained EVD case investigators should determine whether the exposed person should be considered and followed as an EVD contact.

Management of pregnant EVD cases, contacts and survivors

- **Pregnant women with EVD and pregnant women who survive EVD with ongoing pregnancies²:** Comprehensive Ebola IPC precautions (see above) must be used during childbirth and/or management of complications to prevent exposure to infectious intrauterine contents (i.e., amniotic fluid, placenta, fetus). The neonates of such women should also be managed using Ebola IPC precautions for 21 days following birth.
- **Pregnant women who are contacts of EVD cases** (within the 21 days of monitoring): Comprehensive Ebola IPC precautions (see above) should be used during childbirth and/or management of complications to prevent exposure to potentially infectious intrauterine contents (i.e., amniotic fluid, placenta, fetus). The EVD status of mother, newborn, stillbirth and other products of conception such as placenta, membranes and fetal tissue should be determined as rapidly as possible to guide further management.
- **EVD survivors:** There is no evidence that women who become pregnant after recovery from EVD are at risk of EVD transmission. Standard obstetric IPC precautions should be used when exposure to bodily fluids is possible during childbirth and/or management of complications.
- **Standard obstetric IPC precautions should be used for pregnant women who do not belong to any of the above risk groups for Ebola virus transmission³.**



PPE = personal protective equipment

EVD = Ebola virus disease

² Pregnant women with EVD who have recovered without loss of pregnancy

³ Standard obstetric IPC precautions include: fluid resistant gown, face shield or mask and goggles, elbow length gynaecologic gloves, and rubber boots or closed shoes and overshoes.

Lactation and EVD

EVD survivors who were pregnant or lactating when infected: Limited evidence suggests that breast milk can remain positive for Ebola for more than 2 months after symptom onset. Further IPC precautions⁴ are required to prevent exposing others to the virus.

See 'Infant feeding in the context of Ebola' (<http://www.enonline.net/infantfeedinginthecontextofebola2014>) for further guidance.

References

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⁴ Lactating EVD survivors whose breast milk is PCR positive or has not been tested should practice good hand and personal hygiene by immediately and thoroughly washing with soap and water after any contact with breast milk. Any other exposed objects or equipment contaminated with breast milk should be washed with water and soap and then decontaminated by soaking them in a 0.5% chlorine solution for about 15 minutes. Linen or clothing contaminated with breast milk should ideally be safely disposed and incinerated (6); if laundered, linen should be washed with detergent and water first, rinsed and then soaked in 0.5% chlorine solution for approximately 15 minutes. Women should be informed that linen soaked in 0.5% chlorine solution may become damaged.