World Health Organization

INTERIM GUIDANCE

Ebola virus disease in pregnancy: Screening and management of Ebola contacts, cases, 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 (EBOV) to others, e.g.
   - pregnant women with active EVD
   - pregnant women who survive EVD with an ongoing pregnancy
   - pregnant women who are contacts[1] of suspect, probable or confirmed EVD cases

This emergency guidance from 2015 has been revised in August 2018. An emergency guideline development procedure has been started.

EVERY PERSON; INCLUDING ALL PREGNANT WOMEN, SURVIVORS, THEIR PARTNERS AND FAMILIES SHOULD BE SHOWN RESPECT, DIGNITY AND COMPASSION

Background

Evidence suggests (1) that pregnant women with active EVD and pregnant women who survive EVD without pregnancy loss may transmit the virus during childbirth and/or management of obstetric complications. Pregnant women who are contacts of confirmed EBOV cases may also pose a risk of transmitting to others depending on the time of EBOV exposure and development of EVD.

EVD in pregnancy is associated with a high rate of obstetric complications and poor maternal and perinatal outcomes, including miscarriage, pre-labour rupture of membranes, preterm labour/preterm birth, antepartum and postpartum haemorrhage,, stillbirth including intrauterine fetal death, maternal death and neonatal death. Although rare, pregnant women with EVD have recovered without loss of pregnancy. Studies suggest that intrauterine contents can remain reverse transcription polymerase chain reaction (RT-PCR) positive for EBOV RNA after the acute disease*(2). There are no reports of newborn survival beyond the neonatal period.*

The diagnosis of EVD during pregnancy can be challenging due to symptoms that may be present both in pregnancy and EVD such as nausea and fatigue, and because of atypical EVD presentation such as delayed onset of fever *(3).* Rigorous screening (as described below) for EVD exposure during pregnancy is essential in geographical areas with an ongoing or recent EV outbreak. EBOV transmission. Ebola infection prevention and control (IPC) precautions must be stringently applied when providing care to pregnant women and

[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/

WHO/EVD/HSE/PED/15.1

newborns who are known EVD survivors, have been exposed to EBOV or who express symptoms suggestive of EVD.

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

- In areas affected by Ebola, a **careful clinical and EVD exposure history** should be taken from all pregnant women to determine any EVD exposure 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 miscarriage or fetal loss
    - pre-labour rupture of membranes
    - pre-term rupture of membranes
    - preterm labour/preterm birth
    - antepartum or postpartum haemorrhage
    - intrauterine fetal death
    - stillbirth
    - maternal death
    - neonatal death
- **RT- PCR testing for EVD** should be conducted for:
    - pregnant women who meet the EVD case definition (4).
    - 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** as part of the emergency response, to identify, manage or refer pregnant women at risk of transmitting EVD. Pregnant women should receive appropriate obstetric care while also preventing transmission.
- **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 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 *(5).*

IPC precautions for pregnant women at risk of transmitting EBOV 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 transmitting EBOV *(6, 7, 8):*
    - 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 transmitting EBOV 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 a 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 a pregnant woman or newborn at risk of transmitting EBOV, 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 suspect or confirmed EVD and pregnant women who survived a suspected or confirmed EVD with an ongoing pregnancy[2]:** 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). EVD rapid diagnostics should be used for the mother, newborn, stillbirth and other products of conception such as placenta, membranes and fetal tissue as rapidly as possible to guide further management.

- ***Standard obstetric IPC precautions should always be used for pregnant women who do not belong to any of the above risk groups for Ebola virus transmission[3].***

Lactation and EVD

EVD survivors who were pregnant or lactating when infected: Evidence suggests (9) that breast milk can remain positive for Ebola for more than 2 months after symptom onset. Special guidance is available for this situation, stipulating when breast feeding needs to be exchanged for formula feeding. Further IPC precautions[4] are required to prevent exposing others to the virus. Please see 'Infant feeding in the context of Ebola' (http://www.ennonline.net/infantfeedinginthecontextofebola2014) for further guidance.

References

1. "Ebola virus disease and pregnancy - A review of the current knowledge of Ebola virus pathogenesis, maternal and neonatal outcomes" Bebell et al. Birth Defects Res. 2017 March 15; 109(5): 353–362. doi:10.1002/bdra.23558

2. Baggi FM, Taybi A, Kurth A, Van Herp M, Di Caro A, Wölfel R, Günther S, Decroo T, Declerck H, Jonckheere S. Management of pregnant women infected with Ebola virus in a treatment centre in Guinea, June 2014. Euro Surveill. 2014;19(49):pii=20983. (http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=20983, accessed 14 August 2015)

[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.

[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.

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4. http://www.who.int/csr/resources/publications/ebola/ebola-case-definition-contact-en.pdf

5. How to conduct safe and dignified burial of a patient who has died from suspected or confirmed Ebola virus disease. Geneva: World Health Organization; November 2014. (http://www.who.int/csr/resources /publications/ebola/safe-burial-protocol/en/, accessed on 14 August 2015).

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8. Interim infection prevention and control guidance for care of patients with suspected or confirmed filovirus haemorrhagic fever in health-care settings, with focus on Ebola. Geneva: World Health Organization; December 2014 (http://www.who.int/csr/resources/publications/ebola/filovirus_infection _control/en/, accessed on 14 August 2015).

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