

# **Pandemic (H1N1) Virus Infection in Pregnancy**

## **Interim guidelines for Public Healthcare Officials and Clinicians**

With the presence of community transmission of Pandemic Influenza A (H1N1) Virus Infection it is important to note that pregnancy is considered as a high risk condition.

The disease may become more severe during pregnancy and there is high risk of complications especially in pregnant women with co-morbidities (eg. Diabetes, Heart disease, Bronchial Asthma). On the other hand, it is also associated with increased risk of adverse pregnancy outcomes (eg. spontaneous abortion, preterm birth and fetal distress).

The objective of this document is to provide all healthcare officials both in preventive and curative sectors with specific guidelines to follow aiming to mitigate untoward consequences following H1N1 infection.

### **1. Protection against infection**

- a. Pregnant women and women in reproductive age group who have no symptoms of influenza should be educated on early clinical manifestations of Pandemic (H1N1) 2009 Virus Infection (fever along with cough, sore throat, rhinorrhea, headache, muscle pain and malaise)
- b. They should avoid unnecessary travel, crowded public places and public transport as much as possible.
- c. They should be advised to stay at home and to practise cough and sneeze etiquette (covering mouth and nose when coughing or sneezing) or wear a mask (at least a home-made mask) if they have fever and flu-like symptoms.
- d. Pregnant women and new mothers should avoid providing care for persons with influenza-like illnesses except for their own newborns.
- e. Antenatal clinic visits should be reduced to the minimum required and women with low-risk pregnancies should be advised to postpone clinic visits in early pregnancy during the outbreak.
- f. All preventive measures to avoid transmission of infection should be taken by health care workers when attending to pregnant women
- g. Anyone with respiratory symptoms should not provide care for the pregnant women or the mother and newborn baby.
- h. Care for symptomatic pregnant women (with fever and flu-like symptoms) should be organized in a separate area in the clinic or OPD whenever possible.

### **2. Case identification**

#### **Suspected case:**

An Individual presenting with acute febrile respiratory illness (fever  $\geq 38$  °C) with the spectrum of disease from influenza-like illness (cough, sore throat, shortness of breath) to pneumonia.

#### **Probable case:**

An individual with an influenza test that is positive for influenza A, but is unsubtypeable by reagents used to detect seasonal influenza virus infection.

### **Confirmed case:**

An individual with laboratory confirmed pandemic influenza A(H1N1) 2009 virus infection by one or more of the following tests:

- real-time (RT) PCR
- viral culture
- four-fold rise in pandemic influenza A(H1N1) 2009 virus specific neutralizing antibodies.

### **3. Seeking medical care**

- Pregnant mothers should consult a qualified physician (either in government or private sector) immediately if they have above symptoms.
- Pregnant mothers should be admitted to a hospital for specialized care, if they present with features of **complicated influenza or progressive disease**
  - Manifestations of cardio-respiratory distress (e.g. shortness of breath either during physical activity or while resting /dyspnoea, tachypnea, hypoxia, low blood pressure)
  - Radiological signs of lower respiratory tract disease (e.g. pneumonia)
  - Central nervous system (CNS) involvement (e.g. altered mental status, unconsciousness, drowsiness, recurring or persistent convulsions (seizures), confusion, severe weakness or paralysis)
  - Severe dehydration
  - Persistent high fever and other symptoms beyond 3 days
- A compulsory follow up visit in 3 days time should be arranged even in the absence of worsening of the disease

Medical Officers of Health and other health care workers involved in provision of care to pregnant mothers should highlight Pandemic Influenza illness in all health education activities and especially in routine antenatal clinics.

Public Health Midwives and other field health officials should refer any pregnant mother with fever and flu-like symptoms for proper medical care without delay.

**All pregnant mothers should be admitted to the hospital, if they develop any signs or symptoms of progressive disease or danger signs or if they fail to improve within 72 hours of the onset of symptoms.**

### **4. Management in the hospital**

- Provide a disposable/surgical face mask to the patient.
- Ask her to practise hand hygiene and washing often.
- Attending health care providers should also wear face masks properly whenever in contact with infected mother.
- Isolation -Care for symptomatic patients should be organized in a separate area of the antenatal ward.
- Consultant or the clinician of the highest rank (Senior Registrar/Registrar/SHO) should be informed immediately on admission.

- Institutions managing pregnant women should request adequate stocks of Oseltamivir and consider transferring the patients if they need specialized care only. Most of the pregnant women can be managed if Oseltamivir is started early. It is a must to start Oseltamivir when H1N1 is suspected without waiting for laboratory confirmation.

## **Diagnosis**

Clinical specimens to be collected for laboratory diagnosis are respiratory samples. Appropriate laboratory specimens (samples from the upper respiratory tract, including a combination of nasal or nasopharyngeal samples, and a throat swab) should be collected from these patients. *(Note: If patient has developed pneumonia swab samples would not be positive and needs bronchial/alveoli aspirates.)*

These specimens should be sent to Medical Research Institute (MRI) for laboratory diagnosis using the special request form developed by the MRI for this purpose.

A detailed clinical history indicating the justification for the investigation should be included in the request.

## **Antiviral therapy**

Consultant or his delegate caring for the pregnant mother should start antiviral therapy immediately.

Dose: Oseltamivir 75mg twice a day for 5 days

In severe cases higher doses and longer duration of treatment may be considered.

Drug supply: Arrangements should be made to make 24 hr availability of antiviral drugs in the hospital &/or obstetric and gynaecological wards.

The antiviral drug is safe for use even in the first trimester.

**All pregnant mothers with severe/complicated disease or signs of progression of the disease (or even suspected cases) should be treated with the anti viral oseltamivir. Treatment should be initiated as soon as possible.**

**Treatment with antiviral medications should begin without waiting for collecting specimen or results of diagnostic testing.**

## **Chemoprophylaxis is NOT recommended in pregnancy.**

The patient should be provided with necessary supportive therapy (adequate nutrition and oral fluids) and medication (eg antipyretics, antibiotics where indicated, rehydration etc)

Oxygen saturation should be monitored by pulse oximetry, whenever possible. Supplemental oxygen should be provided to correct hypoxaemia.

Severe cases may need care at an Intensive Care Unit. Therefore ensure the availability of such facilities beforehand.

Non-Steroidal Anti Inflammatory Drugs (NSAIDs) should be avoided.

Since there is high risk of foetal distress and preterm labour, consider administration of corticosteroids for promotion of fetal lung maturation where applicable.

## Labour

- Organize separate areas for labour and delivery for these women.
- Provide routine intrapartum and postpartum care.
- Provide appropriate interventions where indicated for specific complications related to childbirth, the postpartum/postnatal period or the newborn
- Tocolytics can be used as for any other obstetric case. However consider potential harms related to tachycardia, hypotension and other side effects.
- Since there is a higher risk of fetal distress, discuss with anaesthesiologist the risks and benefits of vaginal delivery and caesarean delivery. Consider the risks of anaesthesia in a severely ill woman.

Reduce the length of stay in the postnatal ward to the minimum required by maternal and newborn condition.

- Anyone (including health care workers) with respiratory symptoms should not provide care for the pregnant woman or the mother and newborn baby.

## Newborn care

- Do not separate the baby from the mother even if the mother has influenza A pandemic (H1N1). Institute rooming-in.
- Mothers should wear a disposable/surgical face mask and practice hand hygiene and hand washing before feeding or handling the baby.
- Support mothers to initiate breastfeeding within one hour of giving birth and to breastfeed frequently and exclusively on demand. If mother is ill, she should be helped to express her breast milk and feed it to the infant.  
*(Treatment with antivirals to a lactating mother is not a contraindication for breastfeeding)*
- Newborns of infected mothers should be observed for development of infection. Newborn infants are unlikely to have typical influenza signs. Influenza or its complications in newborn infants may begin with less typical signs such as apnoea, fever, fast breathing, cyanosis, excessive sleeping, lethargy, feeding poorly and dehydration.

Newborn infants with severe or deteriorating illness and those at risk of more severe or complicated illness should promptly be treated with antiviral drugs.

Oseltamivir dose for babies: 3mg/kg twice daily for 5 days  
(Dosage form in syrup available)

Mothers who are breast feeding may continue breastfeeding while ill and receiving oseltamivir.

## 5. Discharge Criteria

Pregnant mothers could be discharged after completion of 4 days of treatment if she has clinically recovered. Decision on discharging those with severe disease should be taken by the treating clinicians based on their clinical judgment.

## 6. Notification:

All admitted cases should be notified using routine procedure to the relevant Medical Officer of Health by the treating clinicians

Medical Officer – Maternal and Child Health (MO-MCH) should notify all suspected cases of H1N1 in pregnancy to Epidemiology Unit

In the event of a maternal death, notification should be sent without delay to the Family Health Bureau. It should be emphasized that a post-mortem is mandatory in all maternal deaths.

In addition to routine notification, all suspected or confirmed pregnant women / newborns / children with h1N1 should be notified to Family Health Bureau.

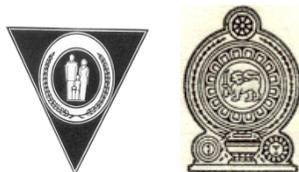
## 7. Safety of Health Care Workers

Please refer to the General Circular No : 01-37/2009 Interim Guidelines for Clinical Management and Laboratory Investigation of Patients with Pandemic Influenza A (H1N1) 2009 Virus Infection in a Setting with Sustained Community Transmission issued by Director General Health Services, Ministry of Health and Website of Epidemiology Unit [www.epid.gov.lk](http://www.epid.gov.lk)

## 8. Care of pregnant HCW

Pregnant health care workers should be reassigned to non-contaminated or low risk areas eg. Orthopaedic units, dermatology units.

They should be given high priority to receive Personal Protection Equipments.



**FAMILY HEALTH BUREAU**  
**MINISTRY OF HEALTH**