

Pregnant Women and Novel Influenza, a Virus (H1N1): Considerations for Clinicians

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Human infections with a novel influenza A (H1N1) virus, easily transmissible among humans, were first identified in April 2009.¹ The virus is antigenically and genetically distinct from other human influenza A (H1N1) viruses in circulation since 1977.² On August 10, 2010, the World Health Organization (WHO) International Health Regulations (IHR) Emergency Committee declared an end to the 2009 H1N1 pandemic globally.³ However, intensive virus activity continues in many countries including India. H1N1 swine flu cases have been occurring in Kerala along with other viral-origin fevers and are spreading widely across the coastal states.⁴

There is insufficient data to determine, who is at higher risk for complications of novel influenza A (H1N1) virus infection. However, it is reasonable to assume that the same age and risk groups, who are at higher risk for seasonal influenza complications should also be considered at higher risk for novel influenza A (H1N1) complications. In obstetric patients an increased rate of spontaneous abortions, preterm births, and adverse perinatal and maternal outcomes is anticipated. Influenza is more likely to cause a more severe type of illness in pregnant women due to changes in the cardiorespiratory and immune systems.⁵

The signs and symptoms of novel influenza A (H1N1) virus infection are similar to those of seasonal influenza.^{6,7} Definitive diagnosis requires specific testing for H1N1 viruses using real-time reverse transcriptase-polymerase chain reaction or viral culture.^{6,8} Rapid influenza diagnostic tests (RIDTs) for seasonal influenza sometimes can detect novel influenza A (H1N1) virus, but sensitivity has been estimated at 40 to 70%.^{8,9} Therefore, negative RIDTs should not be used to exclude the diagnosis.⁸

Pregnant women who meet current case-definitions for confirmed, probable or suspected infection should receive empiric antiviral treatment. Pregnant women who are close contacts of persons with suspected, probable or confirmed cases of novel influenza A (H1N1) should receive chemoprophylaxis. Patients can be contagious for upto seven days after the onset of the illness. Children, especially younger ones, may be contagious for longer periods. Antiviral treatment should be initiated as soon as possible after the onset of influenza symptoms with benefits expected to be greatest if started within 48 hours.⁵

OTHER WAYS TO REDUCE RISK FOR PREGNANT WOMEN⁵

The risk might be reduced by taking steps to reduce the chance of being exposed to respiratory infections. These actions include frequent hand washing, covering coughs, having ill persons stay home except to seek medical care and minimize contact with others in the household. Additional measures include voluntary home quarantine of members of households with confirmed or probable novel influenza A (H1N1) cases, reduction of unnecessary social contacts and avoidance whenever possible of crowded settings. If used correctly, facemasks and respirators may help reduce the risk of getting influenza, but they should be used along with other preventive measures, such as avoiding close contact and maintaining good hand hygiene. A respirator that fits snugly on the face can filter out small particles that can be inhaled around the edges of a facemask, but compared to a facemask it is harder to breathe through a respirator for long periods of time.

Table 1: Antiviral medication dosing recommendations for treatment or chemoprophylaxis of novel influenza A (H1N1) infection⁵

| <i>Drug</i> | <i>Dosage</i> | <i>Chemoprophylaxis</i> | <i>Side effects</i> |
|-----------------------|---|--|--|
| Oseltamivir (Tamiflu) | 75 mg capsule twice per day for 5 days | 75 mg capsule once per day for 10 days. | Nausea, Vomiting |
| Zanamivir (Relenza) | Two 5 mg inhalations (10 mg total) twice per day. | Two 5 mg inhalations (10 mg) once per day for 10 days. | Dizziness, stuffy nose, nausea, headache, diarrhea, wheezing, confusion and abnormal behavior. |

BREASTFEEDING CONSIDERATIONS⁵

Infants who are not breastfed, are particularly vulnerable to infection and hospitalization for severe respiratory illness. Women, who deliver, should be encouraged to initiate breastfeeding early and feed frequently so that the infant can receive as much maternal antibodies as possible. Antiviral medication treatment or prophylaxis is not a contraindication for breastfeeding.

If maternal illness prevents safe feeding at the breast, but she can still pump, she should be encouraged to do so. The risk for novel influenza A (H1N1) transmission through breast milk is unknown. Expressed milk should be used for infants who are too ill to feed at the breast. In certain situations, infants may be able to use donor human milk from a certified milk bank.

CARE OF THE INFANT⁵

Frequent hand washing with soap and water should be advised to mothers. Infant hands should also be washed especially after they place their hands in mouths. The infant should be kept as close to mother as possible. Early and frequent skin-to-skin contact between mother and infant should be encouraged. Sharing of toys and other items that have been in infant's mouth should be discouraged. All such items should be washed thoroughly with soap and water.

GUIDELINES ISSUED BY THE GOVERNMENT OF INDIA: KEY MESSAGES FOR GENERAL PRACTITIONERS¹⁰

1. Any person with flu like symptoms should be clinically assessed by the designated medical officer, who will decide on the need for H1N1 testing. The test cannot be demanded by the patient.
2. Except for cases that are severe, the patient would be allowed to go home.
3. The sample of the suspect case would be collected and sent to the notified laboratory for testing. If tested as positive for H1N1 and in case the symptoms are mild, the patient should be informed and given the option of admission into the hospital or isolation and treatment at his/her own home.
4. In case the patient opts for home isolation and treatment, he/she would be provided with detailed guidelines / safety measures to be strictly adhered to by the entire household of the patient. He/ she would have to provide full contact details of entire household. The household and social contacts would be provided with the preventive treatment.
5. Notwithstanding the above guidelines, the decision of the doctor of the notified hospital about admitting the patient would be final.
6. In case the test is negative, the patient will accordingly be informed.

KEY MESSAGES FOR PREGNANT WOMEN¹¹

- All pregnant women should be informed of their increased risk of complications, if they become ill with influenza, including the H1N1 virus.

- They should be advised to practice basic infection control—frequent hand washing or alcohol sanitizing; cough and sneeze etiquette; keeping common surfaces clean.
- They should be advised to consult their healthcare provider quickly, if they develop any flu like symptoms.
- Women, who are ill with influenza, should be advised to minimize exposure to their baby by practicing frequent hand washing and possibly wearing a mask.
- Antiviral medication is not a contraindication to breast feeding.

Vaccination

Vaccination during pregnancy protects both the mother and her infant [upto 6 months old] from lab confirmed influenza. Influenza vaccine can be given to pregnant women in any trimester. The vaccine administered should be the inactivated vaccine [flu shot] and not the live attenuated vaccine [nasal spray]. Postpartum women can receive either type of vaccine. Breastfeeding is not a contraindication to influenza vaccination.¹²

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