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CLINICAL ADVISORY

To: Departments of Obstetrics and Gynecology, Family Medicine, Emergency Medicine, and
Infectious Diseases at hospitals and community health centers
Obstetrician – gynecologists
Family Practitioners
Nurse Practitioners
Nurse midwives

From: Lauren A. Smith, MD, MPH, Chief Medical Officer, Department of Public Health
Alfred DeMaria, Jr., MD, Medical Director, Bureau of Infectious Disease Prevention,
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Kevin Cranston, Director, Bureau of Infectious Disease Prevention, Response and Services

Date: June 18, 2009

Re: Novel Swine-Origin Influenza A H1N1 Infection in Pregnant Women

This advisory is intended to provide guidance for the diagnosis and management of pregnant women with influenza like illness (ILI) during the current outbreak of novel influenza A H1N1 in Massachusetts. Pregnant women are known to be at higher risk for complications from infection with seasonal influenza viruses, and severe disease among pregnant women was reported during past pandemics. **Given the prevalence of circulating influenza A H1N1 virus, pregnant women presenting with signs and symptoms consistent with ILI (fever and respiratory symptoms, including cough or sore throat) should receive prompt empiric antiviral treatment for influenza A H1N1.** Treatment should *not* be delayed awaiting confirmatory results of H1N1 virus testing. In particular, due to the varying sensitivity of rapid influenza A tests, pregnant women with ILI should be **treated presumptively even if rapid influenza A tests are negative** and should continue treatment unless more sensitive tests for influenza A H1N1 are specifically negative or until recommended treatment course is completed.

As of June 10, 37 of 1076 of confirmed cases (3.4 %) of H1N1 infection in Massachusetts were in pregnant women. For women whose hospitalization status was known, 9 of 22 or 41% were hospitalized; some requiring intubation and ventilatory support. If all those with missing data are assumed to have not been hospitalized, the hospitalization rate would be 24% (9 of 37), which is more than 3 times the overall rate of 7% among all confirmed cases. The average time between the initial clinical visit and initiation of antiviral therapy was 1.7 days.

Antiviral treatment of pregnant women: *

The observed severity of illness among pregnant women in Massachusetts highlights the need for early, empiric antiviral treatment. Pregnancy should not be considered a contraindication to oseltamivir or zanamivir use. Pregnant women might be at higher risk for severe complications from novel influenza A

(H1N1), and the benefits of treatment with zanamivir or oseltamivir likely outweigh the theoretical risks of antiviral use. *Antiviral treatment with zanamivir or oseltamivir should be initiated as soon as possible after the onset of influenza symptoms, with benefit greatest if started within 48 hours of onset.* See Table 1 for dosing information.

Oseltamivir and zanamivir are "Pregnancy Category C" medications, indicating that no clinical studies have been conducted to assess the safety of these medications for pregnant women. Although a few adverse effects have been reported in pregnant women who took these medications, no relation between the use of these medications and those adverse events has been established.

In addition, antiviral prophylaxis is indicated for pregnant women who are close contacts of suspect, probable and confirmed cases. This includes pregnant health care workers with direct exposure to patients with ILI without appropriate respiratory protection.

For specific details about antiviral treatment of pregnant women, see the CDC guidance *Pregnant women and novel influenza A H1N1: clinical considerations*, available at www.cdc.gov/h1n1flu/clinician_pregnant.htm.

Table 1: Influenza A H1N1 antiviral medication dosing recommendations*

Medication	Treatment	Chemoprophylaxis
Oseltamivir	75 mg capsule twice per day for 5 days	75 mg capsule once per day
Zanamivir	Two 5 mg inhalations (10 mg total) twice per day	Two 5 mg inhalations (10 mg total) once per day

* From: *Interim Guidance on Antiviral Recommendations for Patients with Novel Influenza A (H1N1) Virus Infection and Their Close Contacts*; www.cdc.gov/h1n1flu/recommendations.htm.

For more information:

- The latest clinical guidance related to pregnant women and influenza A H1N1 can be found on the CDC website:
 - *Pregnant women and novel influenza A H1N1: clinical considerations:* www.cdc.gov/h1n1flu/clinician_pregnant.htm.
 - *Guidance for pregnant women in education, childcare and health care:* www.cdc.gov/h1n1flu/guidance/pregnant-hcw-educators.htm
 - *What pregnant women should know:* www.cdc.gov/h1n1flu/guidance/pregnant.htm
 - *Breastfeeding your baby:* www.cdc.gov/h1n1flu/breastfeeding.htm

- Clinicians and laboratories must contact an MDPH epidemiologist at **617-983-6800** (available 24/7) to obtain approval for diagnostic testing at the William A Hinton State Laboratory. MDPH staff can also provide guidance about treatment and infection control measures.

- For additional information for clinicians and patients, please go to www.mass.gov/dph/swineflu.