

Influenza and Pregnancy

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Received: January 1, 2015; Accepted: January 6, 2015

Keywords: Influenza; Pregnancy; Oseltamivir

Since the 2009 H1N1 pandemic, we have learned a lot about influenza and pregnancy. The results of many studies have provided evidence on the impact of influenza on pregnant women, the benefits of treatment with oseltamivir, the safety of the influenza vaccine, and the steps clinicians can take to increase vaccination rates among pregnant women. We know much more now than we did five years ago about how to keep women and their infants safe from influenza. We heard reports of severe illness, hospitalization, and death among pregnant women, after getting flu (1, 2).

In fact, changes in the immune system, heart, and lungs during pregnancy make pregnant women more prone to severe illness, hospitalization, and even death from influenza. Infants born to women severely ill with influenza also have an increased risk for adverse birth outcomes, including preterm birth and small for gestational age (SGA) (1). We also find that pregnant women often are unaware of the benefits of influenza vaccination for their baby. Flu shots during pregnancy protect not only the pregnant woman, but also her unborn baby and even her infant during the first six months of life. Studies have also shown that vaccinating the mother during pregnancy may reduce the occurrence of adverse outcomes like SGA and preterm birth in infants (3).

Pregnant women should receive influenza vaccination, according to an updated opinion of the Committee on Obstetric Practice and Immunization Expert Work Group of the American College of Obstetricians and Gynecologists (ACOG). The committee emphasizes that obstetrician-gynecologists, other healthcare providers, healthcare organizations, and public health officials should work to improve the rate of influenza vaccination among pregnant women (3).

Recent data continue to show that the vaccine is safe for pregnant women and their newborns, which should be reassuring to patients and clinicians alike, the commit-

tee notes. Moreover, other studies have shown that newer quadrivalent vaccines are safe and appropriate for use in pregnant women as well (3).

Pregnant women are at increased risk for serious illness from seasonal and pandemic influenza, because the immune system changes during pregnancy. These changes appear to place women at increased risk for illness and influenza-related complications. It is therefore critical that women receive influenza vaccination during pregnancy (4). Influenza prevention is also important during preconception and during both prenatal and postpartum care. The inactivated influenza vaccine can be given to women at any stage of pregnancy. However, the live attenuated vaccine is not recommended for pregnant women, but can be used safely during the postnatal period. The ACIP recommendations are consistent with those of the Centers for Disease Control (CDC), recommend that all adults be given an annual influenza vaccine (5).

Pregnant women are often unaware of the benefits of influenza vaccination for their babies. CDC recommends that everyone six months and older should get vaccinated against influenza each year. An influenza vaccination is the best protection currently available against influenza. Receiving an influenza vaccine during pregnancy not only reduces a pregnant woman's risk for influenza infection, but also the risk for her infant to become ill with influenza during the first six months of life, when the baby is too young to receive the flu vaccine. Studies have shown that vaccinating the mother during pregnancy also may reduce the occurrence of such adverse pregnancy outcomes as SGA and preterm birth (5).

As a healthcare provider, the recommendations for flu vaccine are critical motivators for pregnant women. Healthcare providers should inform pregnant women of their increased risk of developing influenza related complications and encourage them to receive vaccine. Pregnant women should also be informed that flu vaccine

during pregnancy can protect the baby from getting sick with influenza during the first six months of life (6). It is important that pregnant women receive prompt antiviral treatment, if suspected of having influenza. Pregnant women with confirmed or suspected influenza should be treated with oseltamivir as soon as possible, regardless of pregnancy trimester. Pregnant women are recommended to receive the same antiviral dosing as non pregnant women (7).

The decision to treat should be based on a clinical evaluation rather than diagnostic testing; because of the limited sensitivity of rapid influenza diagnostic tests and the time required to complete definitive testing. Ideally, antiviral treatment should begin within 48 hours of the onset of symptoms. For that reason, pregnant women with symptoms of influenza should be encouraged to seek care early in their illness. However, treatment of pregnant women appears to be of clinical benefit, even when that treatment is started more than 48 hours after symptoms onset. Available data indicate that oseltamivir does not harm the fetus when given to a pregnant woman (4, 8, 9).

In conclusion, the recommendation and offer of flu vaccine to the patients can make a difference, for better and healthy world.

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