

Influenza Vaccination of Pregnant Mothers Protects Their Infants

Maternal vaccination reduced influenza-related hospitalizations and ED visits in young infants by one third.

Maternal vaccination protects infants from diseases such as pertussis and COVID-19 during the first few months of life. Influenza rates are rising throughout the U.S., where infants and children with this illness contribute significantly to emergency department (ED) visits and hospitalizations. Although influenza vaccination is universally recommended starting at age 6 months, uptake for young infants (as well as pregnant persons) is low.

In a test-negative case control study of data from the New Vaccine Surveillance Network (NVSN) throughout three consecutive influenza seasons, researchers assessed the impact of influenza vaccination during pregnancy on infant influenza-related ED visits and hospitalizations. Among 3764 eligible infants aged <6 months with respiratory illness, 223 had influenza with reported or confirmed maternal influenza immunization status. Key findings are:

- In all, 53% of enrolled infants were born to vaccinated mothers, and 42% tested positive for influenza.
- Infants with influenza were older and more likely to be non-Hispanic Black and publicly insured.
- Overall effectiveness of maternal vaccination against ED visits or hospitalization was 34% and was highest when vaccine was given during the third trimester compared with other trimesters (54% vs. 17%); rates were most pronounced against influenza A/H1N1 (39%).
- Younger infants benefitted most from maternal vaccination (effectiveness was 53% for infants aged <3 months).

COMMENT

Influenza complications in young infants approach those seen in the elderly. Before 6 months of age, however, children are too young to receive vaccination. This study confirms the benefits of transplacental passive vaccination gained by immunizing pregnant mothers. The seasonal influenza vaccine is safe during pregnancy, and those caring for pregnant people should encourage its use (along with Tdap and COVID-19 vaccines) during the final months of pregnancy — with a heightened focus on susceptible communities where vaccination rates are lowest. — **Deborah Lehman, MD**

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Sahni LC et al. Maternal vaccine effectiveness against influenza-associated hospitalizations and emergency department visits in infants. *JAMA Pediatr* 2023 Dec 18; [e-pub]. (<https://doi.org/10.1001/jamapediatrics.2023.5639>)