Flu vaccine reduces risk of flu hospitalization among pregnant women

Over the course of six flu seasons, getting a flu shot reduced a pregnant woman’s risk of being hospitalized from flu by an average of 40 percent.

The findings come from a multi-country, CDC-coauthored study published today in Clinical infectious Diseases. It is the first study to show flu vaccination protected pregnant women against flu-associated hospitalization. Previous studies have shown that a flu shot can reduce a pregnant woman’s risk of flu illness.

CDC recommends pregnant women get a flu shot because they are at high risk of developing serious flu illness, including illness resulting in hospitalization.

“Expecting mothers face a number of threats to their health and the health of their baby during pregnancy, and getting the flu is one of them,” explains Allison Naleway, PhD, a study co-author from the Kaiser Permanente Center for Health Research. “This study’s findings underscore the fact that there is a simple, yet impactful way to reduce the possibility of complications from flu during pregnancy: get a flu shot.”

Flu study analyzed data from 2 million pregnant women

For this study, CDC partnered with a number of other public health agencies and health care systems in Australia, Canada, Israel, and the United States through the Pregnancy Influenza Vaccine Effectiveness Network (PREVENT), which consists of health care systems with integrated laboratory, medical, and vaccination records. Sites retrospectively examined medical records of more than two million women who were pregnant from 2010 through 2016 to identify those who were hospitalized with laboratory-confirmed flu.

Key findings include:

- More than 80 percent of pregnancies overlapped with flu season, underscoring the likelihood that pregnant women will be exposed to flu at some point during their pregnancy.
- Flu vaccine was equally protective for pregnant women with underlying medical problems such as asthma and diabetes, which also increase the risk of serious medical complications including a worsening of those chronic conditions.
- Flu vaccine was equally protective for women during all three trimesters.

Flu during pregnancy

Flu illness can range from mild to severe, but it presents a heightened risk for pregnant women who undergo changes to their immune system, heart, and lungs. These changes make them more prone to severe illness from flu throughout their pregnancy and for two weeks after pregnancy.
These findings underscore the importance of ongoing efforts by CDC and other public health agencies and partners to promote influenza vaccination during pregnancy. During recent seasons in the United States, only about half of pregnant women report getting a flu shot (pregnant women should not get the nasal spray vaccine.)

“Our study found that flu vaccination worked equally well for women in any trimester and even reduced the risk of being sick with influenza during delivery,” adds Mark Thompson, PhD, a study co-author from CDC’s Influenza Division.

Benefits of flu vaccine for pregnant women and their babies

Other studies have shown that in addition to helping to protect the pregnant woman, a flu vaccine given during pregnancy helps protect the baby from flu infection for several months after birth, before he or she is old enough to be vaccinated themselves. Learn more about flu vaccination in pregnant women at https://www.cdc.gov/flu/protect/vaccine/pregnant.htm.

Flu shots have been given to millions of pregnant women over many years with a good safety record. There is a lot of evidence that flu vaccines can be given safely during pregnancy; though these data are limited for the first trimester. CDC and ACIP recommend that pregnant women get vaccinated during any trimester of their pregnancy.

CDC works 24/7 saving lives and protecting people from health threats to have a more secure nation. Whether these threats are chronic or acute, manmade or natural, human error or deliberate attack, global or domestic, CDC is the U.S. health protection agency.