



Pregnancy and Flu Vaccines: It's Time to Bump Up Education!

Tatum Shaw, Britteny Summar, Hasfa Ismail
Dean: Mary Bess Griffin, PhD, RN, FNP, CS, CNE
Faculty Advisor: Marica Barnes, DNP, APRN, ACNP-BC



BACKGROUND/SIGNIFICANCE

Vaccines are one of the most successful public health interventions for preventing the spread and transmission of viral infections. One group the CDC (2016) highly encourage to receive the flu vaccination every year are pregnant women. Pregnant women and their babies are at increased risk for influenza-related complications and are more likely to be hospitalized with flu than women of reproductive age who are not pregnant (CDC, 2016). The CDC (2019) reported only 54% of pregnant women received a flu vaccine before or during pregnancy. Education on understanding the importance of flu vaccination during pregnancy is important for both the mom and the baby. Current interventions to help educate them are not effective enough to increase the flu vaccination rates to 100% (Legge, Dodds, MacDonald, Scott, & McNeil, 2014). Vaccines create immunity without causing illness, therefore, if the mother gets the flu shot, it protects the baby from contracting the flu for up to 6 months after birth (Sperling, Riley & Immunization and Emerging Infections Expert Work Group, 2018). This is partially due to the lack of knowledge about the importance of receiving the vaccine. Informing women who are pregnant about the benefits of receiving the influenza vaccine may prove better outcomes for mother and baby as well as decreased low birth weight and preterm births (Sperling, Riley & Immunization and Emerging Infections Expert Work Group, 2018). If pregnant women (P) received comprehensive, in-depth education on the flu vaccine during pregnancy by health care professionals (I), compared to paper handouts (C), would flu vaccination uptake (O) increase?

METHODS

- This review examined if pregnant women who received comprehensive, in-depth education on the flu vaccine would increase flu vaccination rates. Research terms included pregnancy and flu shots, flu rate and pregnancy, death rate of pregnant women and flu shot, pregnant women and flu vaccine, effective interventions for flu vaccine and pregnancy with the assistance from PubMed, Gale Academic, PLOS ONE, CINAHL databases through Vise Library Cumberland University. For the purpose of this study, five peer reviewed articles were found, written in English, within the last six years appropriate to answer the proposed PICO question.
- The Health Belief Model (HBM) was used to guide this review of literature. The HBM concluded that a person's belief in a direct threat of an illness or disease along with that person's belief in the effectiveness of the recommended health behavior or action will predict whether the person will adopt the behavior or not (LaMorte, 2019). It correlates to the finding that pregnant women do not receive the flu shot despite knowledge of the seriousness of flu during pregnancy, due to belief that they will still get the flu, the vaccine could harm the fetus, or provide no health impact at all. It was determined this thought process might be due to lack of comprehensive education given to women about the flu vaccine.



RESULTS

- Bartalo et al. (2020) focused on the determinant of flu vaccine uptake in pregnant women. They concluded that increased awareness of the benefit appeared to motivate pregnant women to protect themselves and the unborn from serious illness and potential hospitalization
- Chamberlain and colleagues (2015) evaluated 325 consenting pregnancy women in who had not yet received a 2013/2014 influenza vaccine or Tdap. Despite the women knowing the diseases were severe for both them and their unborn child, only 34% and 44% intended to receive antenatal influenza and Tdap vaccines, respectively. 46% believed that the influenza vaccine during pregnancy was not safe.
- O'leary et al. (2019) evaluated 477 providers with a survey to determine if women were more likely to refuse the flu vaccine than pregnant women and compared it to other vaccines such as the Tdap. It was determined that 62% of women refused the flu vaccine and 32 % refused Tdap. This study determined that 48% of women reported getting the flu vaccine made them sick after receiving it and 25% reported that it would give their children autism. After educating the women on the risks of not getting the vaccine puts the fetus at risk, the percentage of women vaccinated after receiving this information increased.
- Legge et al. (2014) determined that mothers who were vaccinated had significantly lower odds of having preterm births versus mothers who did not get. Single women, multiparous women, and women who smoked during their pregnancy were less likely to have been vaccinated during pregnancy. Despite strong evidence showing the importance of recommendations by care providers, less than half of pregnant women in 2 recent US studies reported receiving this advice.
- Wong et al. (2016) indicated the lack of existing effective interventions to increase the influenza vaccination rate in pregnant women. They recommend that "clinician provide influenza pamphlets to pregnant women with a verbalized statement about the benefits of influenza vaccine to newborn". They concluded that there was an increase in women getting the flu vaccine after receiving a pamphlet with information regarding the flu vaccine even without a verbal confirmation.

PRACTICE IMPLICATIONS

Mothers want comprehensive education about flu vaccines verbally and nurses are at a great advantage to provide this education and answer questions. Chamberlain et al. (2015) confirmed moms know how dangerous the flu can be but still are not getting the flu vaccine. However, Bartalo, et al. (2020) concluded that increased awareness of the benefits helps motivate pregnant women to protect themselves and the unborn infant. O'Leary et al. (2015) found that when moms talk about the flu vaccine to a health professional, they are more likely to receive it. Nurses can inform these women on current evidence-based practices and provide up to date information to help encourage pregnant women to receive the vaccine.

CONCLUSIONS

The HBM examined the reason why pregnant women believe the flu vaccine would not be effective and thus, did not receive it. If the pregnant woman believed the vaccine improved their health and the health of their unborn child, it is likely to motivate them to get vaccinated. The literature reviewed suggested that verbally educating pregnant mothers about complications of influenza illness and the effectiveness of vaccination increased the likelihood of vaccine uptake. Education in the healthcare setting would give the mother time to ask questions and get accurate information. Current studies support that education increases influenza vaccine uptake in pregnant women, however, continuing research will help justify the use, type, and effectiveness of teaching in clinical practice.

REFERENCES

- Centers for Disease Control and Prevention (2019). Low rates vaccination during pregnancy, leave moms, babies unprotected. <https://www.cdc.gov/control-and-prevention> (2016). Guidelines for vaccinating pregnant women. <https://www.cdc.gov/vaccines/pregnancy/hcp-toolkit/guidelines>.
- Centers for Disease Control and Prevention. (2016). Influenza (flu) vaccine and pregnancy. <https://www.cdc.gov/vaccines/pregnancy/>
- Chamberlain, A. T., Seib, K., Ault, K. A., Orenstein, W. A., Frew, P. M., Malik, F., Cortés, M., Cota, P., Whitney, E. A., Flowers, L. C., Berkelman, R. L., & Omer, S. B. (2015). Factors associated with Intention to receive influenza and tetanus, diphtheria, and acellular pertussis (Tdap) vaccines during pregnancy: A focus on vaccine hesitancy and perceptions of disease severity and vaccine safety. *PLoS Currents*, 7, 1-16.
- Legge, A., Dodds, L., MacDonald, N. E., Scott, J., & McNeil, S. (2014). Rates and determinants of seasonal influenza vaccination in pregnancy and association with neonatal outcomes. *CMAJ: Canadian Medical Association Journal*, 186(4), E157–E164.
- Lok, K. Y., Wong, V. W., L., & Tarrant, M. (2016). Interventions to increase the uptake of seasonal influenza vaccination among pregnant women: A systematic review. *Vaccine*, 34(1), 20–32.
- O'Leary, S. T., Riley, L. E., Lindley, M. C., Allison, M. A., Albert, A. P., Fisher, A., Jiles, A. J., Crane, L. A., Hurley, L. P., Beaty, B., Brtnikova, M., & Kempe, A. (2019). Obstetrician gynecologists' strategies to address vaccine refusal among pregnant women. *Obstetrics and Gynecology*, 133(1), 40–47.
- Sperling, R. S., Riley, L. E., & Immunization and Emerging Infections Expert Work Group (2018). Influenza vaccination, pregnancy safety, and risk of early pregnancy loss. *Obstetrics and Gynecology*, 131(5), 799–802.