



# POSITION STATEMENT

## Immunization in Pregnancy and Postpartum

The American College of Nurse-Midwives (ACNM) affirms that all women and families should have access to accurate, evidence-based information regarding the role of immunizations in the prevention of disease so they can make informed choices about the use of vaccinations for themselves and their families. While ACNM respects the rights of individuals to make choices regarding immunization, the organization actively endorses the use of the recommendations and guidelines of the Centers for Disease Control and Prevention Advisory Committee on Immunization Practices (ACIP) on evidence-based practice in the administration of vaccinations in pregnancy and prevention of communicable diseases. Further, ACNM affirms that it is the role of the certified nurse-midwife/certified midwife (CNM/CM) to:

- Assess the immunization status of all pregnant and postpartum women.
- Recommend that all pregnant women be immunized with the inactivated influenza vaccine and the tetanus, diphtheria, and pertussis (Tdap) vaccine with each pregnancy.<sup>1-5</sup>
- Assess risk for acquiring hepatitis B and vaccinate pregnant women who are at risk, including those who have had more than one sex partner during the previous 6 months, have been evaluated or treated for a sexually transmitted disease (STD), had recent or current injection drug use, or have or had a sex partner positive for the hepatitis B antigen (HBsAg).<sup>1</sup>
- Recommend that postpartum women who are not immune to rubella receive a postpartum measles, mumps, and rubella (MMR) vaccination, and the influenza vaccine according to seasonal indications.
- Counsel women regarding vaccines that are safe during breastfeeding, including Tdap, hepatitis B, influenza, MMR, varicella, meningococcal, and inactivated polio.<sup>6</sup>
- Advise that adults who will be around newborns, such as partners, grandparents, older siblings, and babysitters, be vaccinated against pertussis.<sup>3</sup>
- Provide current information regarding the control of communicable diseases by vaccination, the risks and benefits of immunizations, and current infant and adult immunization guidelines from the Centers for Disease Control and Prevention (CDC) Advisory Committee on Immunization Practice.<sup>7,8</sup>
- Offer immunizations in the clinical setting when feasible and provide CDC Vaccine Information Statements (VIS).<sup>9</sup> When it is not feasible to offer immunizations, provide a list of locations where immunizations are available in the community.
- Maintain current knowledge of evidence-based information regarding the risks and benefits of available vaccines.

### Background

If a woman is vaccinated during pregnancy, she passes antibodies to her fetus, who then has passive immunity as a neonate for the first few months of life. Clinical safety studies have been conducted for decades on the safety of vaccines and pregnancy. Immunization during pregnancy protects the mother, the fetus, and the newborn, but this immunity decreases over time in the newborn. Breastfeeding also passes some immunity to the newborn for diseases for which the mother has developed antibodies.<sup>1,3,4</sup>

**Seasonal influenza** can cause severe illness in pregnant women due to the changes in immune, respiratory, and metabolic responses of pregnancy. Fetuses exposed to influenza are at risk of being born small for gestational age, being born preterm, and intrauterine fetal demise. For fetuses exposed to influenza like illnesses, there are some links to the development of childhood leukemia, Parkinson's disease,

schizophrenia, and bipolar disorder. The inactivated influenza vaccine can safely be given in any trimester and is encouraged as early as possible during the pregnancy.<sup>5,9-16</sup>

**Pertussis** (whooping cough) is a highly contagious bacterial infection that has seen a recent resurgence in the United States. In 2012, 48,277 cases were reported, which demonstrates a marked increase from the low of 1000 in the 1970s. The death toll in 2012 was 20; 15 of these cases occurred in children less than 3 months of age. The current recommendation for immunization of children begins at 2 months of age, but most deaths occur before this. When the vaccine is administered in the third trimester of pregnancy, the immunity crosses the placenta and protects the newborn from being infected by family members and close contacts for a few months after birth. Immunity wanes quickly; therefore, it is recommended that a woman be vaccinated as early as possible in the third trimester in every pregnancy and not before pregnancy.<sup>1,17,23</sup>

**Hepatitis B** is a virus acquired through blood and sexual contact. It infects the liver and can lead to liver cancer. If a woman acquires the virus during pregnancy, her fetus has a high likelihood of being chronically infected and for developing severe liver disease.<sup>24</sup> Routine immunization of newborns in the United States against hepatitis B began decades ago, but only half of all newborns received their birth dose of the vaccine in 2004.<sup>25</sup> Hepatitis B vaccination is not routine in many other countries where the disease is endemic. Immunizing pregnant women against hepatitis B has been shown to be safe<sup>26</sup> but has not been recommended for at-risk women until recently.<sup>1</sup>

ACNM recognizes the crucial role of midwives in improving the health of our nation and the world by actively promoting immunizations for the families to whom they provide care.

## References

1. Centers for Disease Control and Prevention. Guidelines for vaccinating pregnant women. <https://www.cdc.gov/vaccines/pregnancy/hcp/guidelines.html>. Updated August 2016. Accessed August 29, 2018.
2. Kim DK, Riley LE, Harriman KH, Hunter P, Bridges CB. Advisory Committee on Immunization Practices Recommended Immunization Schedule for Adults Aged 19 Years or Older – United States, 2017. *MMWR Morb Mortal Wkly rep* 2017;66: 136-138. DOI: <https://www.cdc.gov/mmwr/volumes/66/wr/mm6605e2.htm> Accessed August 29, 2018
3. Centers for Disease Control and Prevention. Updated recommendations for use of tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine (Tdap) in pregnant women — Advisory Committee on Immunization Practices (ACIP), 2012. *MMWR*. 2013;62(07):131-135.
4. Centers for Disease Control and Prevention. Prevention and control of seasonal influenza with vaccines: recommendations of the Advisory Committee on Immunization Practices — United States, 2013–2014. *MMWR*. 2013;62(7):1-48.
5. Centers for Disease Control and Prevention. Seasonal flu vaccine in pregnant women. [http://www.cdc.gov/flu/protect/vaccine/qa\\_vacpregnant.htm](http://www.cdc.gov/flu/protect/vaccine/qa_vacpregnant.htm) Updated October 3, 2017. Accessed August 29, 2018.
6. Centers for Disease Control and Prevention. Breastfeeding. Vaccinations. <http://www.cdc.gov/breastfeeding/recommendations/vaccinations.htm>, Updated June 7, 2018. Accessed August 29, 2018.
7. Centers for Disease Control and Prevention. Advisory Committee on Immunization Practices (ACIP) recommended immunization schedules for persons aged 0 through 18 years and adults aged 19 years and older – United States, 2014. *MMWR*. 2014; 63(05);110-112. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6305a7.htm> Accessed August 29, 2018.
8. Centers for Disease Control and Prevention. Tdap for pregnant women: information for providers. <http://www.cdc.gov/vaccines/vpd-vac/pertussis/tdap-pregnancy-hcp.htm>. Updated June 29, 2017. Accessed August 29, 2018.
9. Centers for Disease Control and Prevention. Vaccine information statements. <http://www.cdc.gov/vaccines/hcp/vis/index.html>, Updated August 24, 2018. Accessed August 29, 2018.

10. Webb H, Street J, Marshall H. Incorporating immunizations into routine obstetric care to facilitate health care practitioners in implementing maternal immunization recommendations. *Hum Vaccin Immunother*. 2014;10(4):Epub ahead of print.
11. Bednarczyk RA, Adjaye-Gbewonyo D, Omer SB. Safety of influenza immunization during pregnancy for the fetus and the neonate. *Am J Obstet Gynecol*. 2012;207(3 Suppl):S38-S46.
12. Munoz FM. Safety of influenza vaccines in pregnant women. *Am J Obstet Gynecol*. 2012;207(3 Suppl):S33-S37.
13. Moro PL, Broder K, Zheteyeva, L et al. Adverse events in pregnant women following administration of trivalent inactivated influenza vaccine and live attenuated influenza vaccine in the Vaccine Adverse Event Reporting System, 1990-2009. *Am J Obstet Gynecol*. 2011;204(2):146.e1-146.e7.
14. Rasmussen Nordin JD, Kharbanda EU, Vazquez Benitez G, et al. Maternal influenza vaccine and risks for preterm or small for gestational age birth. *J Pediatr*. 2014;Feb 26:Epub ahead of print. doi: 10.1016/j.jpeds.2014.01.037.
15. SA, Jamieson DJ, Uyeki TM. Effects of influenza on pregnant women and infants. *Am J Obstet Gynecol*. 2012;207(3 Suppl):S3-S8.
16. Steinhoff MC, Omer SB. A review of fetal and infant protection associated with antenatal influenza immunization. *Am J Obstet Gynecol*. 2012;207(3 Suppl):S21-S27.
17. Tamma PD, Ault KA, del Rio, C, et al. Safety of influenza vaccination during pregnancy. *Am J Obstet Gynecol*. 2009;201(6):547-552.
18. Gall SA, Myers J, Pichichero M. Maternal immunization with tetanus–diphtheria–pertussis vaccine: effect on maternal and neonatal serum antibody levels. *Am J Obstet Gynecol*. 2011;204(4):334.e1-334.e5.
19. Healy CM, Rench MA, Baker, CJ. Importance of timing of maternal combined tetanus, diphtheria, and acellular pertussis (Tdap) immunization and protection of young infants. *Clin Infect Dis*. 2013;56(4):539-544.
20. Gall SA. Prevention of pertussis, tetanus, and diphtheria among pregnant, postpartum women and infants. *Clin Obstet Gynecol*. 2012;55(2):498-509.
21. Lloyd KL. Protecting pregnant women, newborns, and families from pertussis. *J Midwifery Womens Health*. 2013;58(3):288-296.
22. Tan TQ, Gerbie MV. Pertussis, a disease whose time has come: what can be done to control the problem? *Obstet Gynecol*. 2013;122(2 Pt 1):370-373.
23. Zheteyeva YA, Moro PL, Tepper NK, et al. Adverse event reports after tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccines in pregnant women. *Am J Obstet Gynecol*. 2012;207(1):59.e1-59.e7.
24. Centers for Disease Control and Prevention. A comprehensive immunization strategy to eliminate transmission of hepatitis B virus infection in the United States. Recommendations of the Advisory Committee on Immunization Practices (ACIP) part 1: immunization of infants, children, and adolescents. *MMWR*. 2006;55(RR-16):1-40.
25. Centers for Disease Control and Prevention. A comprehensive immunization strategy to eliminate transmission of hepatitis B virus infection in the United States. Recommendations of the Advisory Committee on Immunization Practices (ACIP) part 2: immunization of adults. *MMWR*. 2006;55(RR-16):1-25.
26. Levy M, Koren, G. Hepatitis B vaccine in pregnancy: maternal and fetal safety. *Am J Perinatol*. 1991;8(3):227-232.

*Note.* Midwifery as used throughout this document refers to the education and practice of certified nurse-midwives (CNMs) and certified midwives (CMs) who have been certified by the American College of Nurse-Midwives (ACNM) or the American Midwifery Certification Board (AMCB).

Source: Division of Standards and Practice

Approved by the Board of Directors, May 2014; Updated February 2017; Updated August 2018; Approved by the Board of Directors, October 2018