Talking Points for CNMs/CMs about 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 programs that support access to safe and affordable immunizations.

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.
- 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).
- Recommend that postpartum women who did not receive influenza and Tdap vaccines during pregnancy are immunized with influenza and Tdap vaccines during the postpartum period and that women who are not immune to rubella receive a postpartum measles, mumps, and rubella (MMR) vaccination.
- Counsel women regarding vaccines that are safe during breastfeeding, including Tdap, hepatitis B, influenza, MMR, varicella, meningococcal, and inactivated polio.
- 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.
- Offer immunizations in the clinical setting when feasible and provide CDC Vaccine Information Statements (VIS).[9] 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.

ACNM 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.

Tips for Improving Vaccination Rates

Every person you care for needs to hear your commitment to the evidence on the benefits of vaccines. You are a valued and trusted source of health information for your patients. Research shows that a recommendation from a health care professional is the top predictor of patients getting vaccinated. Vaccination rates are low when the clinician hesitates to recommend vaccination.[9]

- Review each client's vaccine history at each visit.
- Recommend vaccination at each visit if they are not up to date on their vaccines.
- Use a screening form to create a reminder if you are using paper health records.
- Create a hard stop or flag in the electronic health record to confirm an annual influenza vaccine, a pertussis vaccine in each pregnancy, and other vaccines for completion of series.
- You may bill for screening, and the current procedural terminology (CPT) code for screening should be on every super bill or accessible in the electronic billing functions. Consider adding a screening question during the visit intake so the client can indicate status of annual influenza as contact and insurance information is updated.

Communication tips for improving immunization rates:

- Approach the topic of vaccination individually with sensitivity toward health literacy and cultural considerations of each person.
- Base your response on the educational level of the client and family.[9-12]
- Provide reliable resources for those who have conducted their own research and facilitate ongoing discussion on the safety and advantages of vaccination.
- Those with lower literacy levels may need your strong recommendation and reassurance of the safety of vaccines.

SHARE a strong recommendation.[13]

- **Share** the reasons why the recommended vaccine is a good choice based on health status and risk factors.
- **Highlight** positive personal experiences with vaccination.

- **Address** questions and any concerns about adult vaccines, including safety and effectiveness, in plain and understandable language.
- **Remind** that vaccine-preventable diseases still exist in the United States and have serious implications for infants, friends, and family members.
- **Explain** the potential costs of getting disease, including serious health effects, time lost (missing work, activities, and family events), and financial costs.

Use the **CASE** method.[14]

- **Corroborate:** Find a common ground to acknowledge concerns and set the tone to build a respectful, successful conversation.
- **About me:** Offer your experience, share what you have read, and demonstrate your support for the safety of vaccines. Acknowledge that vaccines may be associated with adverse events and are not 100% effective at preventing the illness but balance that information with the demonstrated benefits.
- **Science:** Describe what the science says and establish your credibility.
- **Explain:** Give your advice and recommendation based on the science. Individuals are more likely to get vaccinated if a health care provider states, "I recommend that you have the following vaccines…"[15]

Most people underestimate the severity of diseases and the safety of vaccines. These are the first issues with which to begin the discussion.[16]

- Key points to address:
  - Consequences of not being vaccinated, including disease symptoms and potential severity
  - Safety and efficacy of the vaccine
  - Possible side effects
  - Benefits of the vaccine
  - How the vaccine works
  - How cold and influenza symptoms differ
  - How long each vaccine will provide protection
- Appealing messaging concepts. Try the following language:
  - *Protect your family:* "The best protection for your family is for everyone to be up to date on vaccines, especially you, the mother. Not only will you and your unborn child be protected, but once born, your infant will have some short-term protection until they are old enough to receive their own vaccines. Your children are most likely to get whooping cough or the flu from you or another household member. Make sure everyone coming in contact with your baby is up-to-date with their whooping cough and flu vaccines."
  - *The flu shot prevents the flu:* "The flu vaccine can prevent the flu—it cannot give you the flu. Once you receive your vaccine, it takes about 2 weeks for your body to build immunity. Occasionally, someone will be exposed to the flu before her vaccine begins to take effect. Sometimes cold symptoms are mistaken for the flu. In either case, it was not the vaccine itself that caused the illness."
  - *The whooping cough vaccine helps protect your baby:* "The whooping cough vaccine (Tdap) helps prevent whooping cough – it cannot give you or your baby this disease. Whooping cough is a very contagious disease that can be deadly for infants. After receiving this vaccine, your body will create protective antibodies and pass some of them to your baby before birth. These antibodies provide your baby some short-term protection against whooping cough in early life. These antibodies can also protect your baby from some of the more serious complications that come along with whooping cough. Your protective antibodies are at their highest about 2 weeks after getting the vaccine. You should get the vaccine late in your pregnancy, preferably early in the 27th to 36th week time frame to provide your baby the most protection when she or he is born. The amount of antibodies in your body decreases over time. When you get the vaccine during one pregnancy, your antibody levels will not stay high enough to provide adequate protection for future pregnancies. It is important for you to get a whooping cough vaccine during each pregnancy so high levels of protective antibodies are transferred to each of your babies."

Addressing Concerns about Vaccines

The vaccine does not give you the disease. Vaccines contain either dead or live proteins called antigens. Live attenuated vaccines have living microbes that are weakened but could make someone sick and should not be given to people with certain conditions. These vaccines include live influenza, measles, mumps, and rubella. Inactivated or "dead" vaccines cannot make you sick. If someone is exposed to the infection before the vaccine has triggered an immune response, the person could come down with the illness after being vaccinated.

Scientific studies and reviews continue to show no relationship between vaccines and autism. The science does not support a link between vaccines and any developmental delays. The March of Dimes, Food and Drug Administration, Centers for Disease Control and Prevention (CDC), National Institutes of Health, American Academy of Pediatrics, Institute of Medicine, and World Health Organization all affirm the safety of vaccines.[17-18] The original article reporting a link between the measles, mumps and rubella (MMR) vaccine and autism was fraudulent, and the author later lost his medical license.[19]

Vaccines are very safe. Each vaccine is tested rigorously in clinical trials before it can be approved by the Food and Drug Administration. Once it is approved for use in humans, the research is reviewed by the Advisory Committee on Immunization Practices, a group of experts who advise the CDC on immunizations. This group spends months or years reviewing the data before making recommendations about which vaccines are recommended for children and adults. They meet 3 times per year and review reports on adverse events, current disease trends, and recently published data on vaccines.

Vaccine side effects are usually mild and temporary. As with any medication or procedure, there are risks with vaccines, and the side effects vary by vaccine. Most side effects are mild or moderate, meaning they do not affect daily activities. They also lessen on their own in a few days. Severe side effects are extremely rare and are less severe than the complications from getting the disease. Each woman who is vaccinated should receive the Vaccine Information Sheet approved by the CDC. Any severe adverse reaction should be reported to the Vaccine Adverse Event Report System (VAERS) at www.vaers.hhs.gov/ or by calling 1-800-822-7967. These reactions are monitored and reviewed regularly by the CDC Immunization Safety Office and the Advisory Committee on Immunization Practices. A list of side effects can be found online at www.cdc.gov/vaccines/vac-gen/side-effects.htm.

The main side effects of being vaccinated are:

- Soreness at the site of injection
- Headache and upper respiratory infection
- Fever, joint pain, sore throat
- Nausea, vomiting, diarrhea; more common in childhood vaccines

Vaccine preventable diseases can be very serious. Natural immunity from getting an infection does provide a better immune response in most cases, but this immunity comes at a higher price. Complications from getting an infection include pneumonia (chicken pox and whooping cough), birth defects (rubella), liver cancer (hepatitis B), and death (measles and whooping cough). The World Health Organization estimates that 1.5 million children less than 5 years of age died worldwide in 2008 from vaccine preventable deaths.[20] In the first 6 months of life, infants are at high risk for complications from whooping cough, even if they are healthy, because their immune systems are still developing. About half of infants who get whooping cough end up in the hospital. The younger the infant is when she/he gets whooping cough, the more likely it is that treatment in the hospital will be needed. Of those infants who are hospitalized with whooping cough, about 1 out of 4 will get pneumonia, and 1 or 2 out of 100 will die. Other complications include violent, uncontrolled shaking, life-threatening pauses in breathing, and brain disease.

Getting the pertussis (whooping cough) vaccine during pregnancy is better than getting the vaccine after birth. Whooping cough vaccination during pregnancy is ideal so the infant has short-term protection at birth. This early protection is important because infants do not get initial whooping cough vaccines until they are 2 months old. During the first few months of life, the infant is at greatest risk for catching whooping cough and having severe, potentially life-threatening complications from the infection. To avoid a gap in protection, it is best for women to get whooping cough vaccines during pregnancy. For continued protection, the infant should be vaccinated for whooping cough starting at 2 months. Public health professionals expect that having mothers get whooping cough vaccines during pregnancy rather than after delivery will prevent more infants from contracting the infection and potentially dying.[21-22]

These diseases still occur in the United States. We have eliminated many diseases in the United States, but in recent years the reported cases of many infections, especially whooping cough and measles, have increased. Currently, unvaccinated international travelers and immigrants who move to the United States with illnesses are key sources of infection.[22] Many parents choose to not vaccinate their children, which creates new generations of children who are not immune to diseases such as measles and polio. 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 1,000 in the 1970s. The death toll in 2012 was 20; 15 of which occurred in infants less than 3 months of age.[22] The current recommendation for immunization of children begins at 2 months of age, but most deaths occur before this. When the vaccine is administered early in the third trimester of pregnancy, the immunity crosses the placenta and protects the newborn.[3, 23] Immunity wanes quickly; therefore, it is recommended that a woman be vaccinated with every pregnancy and not before pregnancy.[3, 21,23]

Vaccines recommended during pregnancy are safe and can protect the mother and child. Clinical trials demonstrating the safety of vaccines in pregnancy began decades ago with women who were vaccinated not knowing they were pregnant. The results of these studies demonstrated that no adverse events to pregnancy can be attributed to the influenza or Tdap vaccines.[24] The benefit of vaccinating during pregnancy is that the woman is protected from disease; therefore, her fetus is protected from potential complications of that disease. If a woman is vaccinated during pregnancy, she passes immunity to her infant, who is protected in the first few months of life. Breastfeeding also passes immunity to the newborn for those diseases to which the mother has developed antibodies.[24]

- Seasonal influenza can cause severe illness in pregnant women due to changes in immune and metabolic responses during pregnancy. Fetuses exposed to influenza are at risk of fetal death, being born small for gestational age, or being born preterm. For those fetuses exposed to influenza-like illnesses, there is some link to the development of childhood leukemia, Parkinson Disease, and schizophrenia.[25,26]

Whooping cough and flu vaccines are safe at the same time. The whooping cough and flu vaccine can be given at the same time during pregnancy or at different visits. Those who are pregnant during flu season should get flu vaccines as early as possible and people do not have to wait until later in pregnancy to get the vaccine.[28]

All vaccines recommended for pregnant women are avail-

able without mercury. Many medications and vaccines contain preservatives to prolong shelf life. Thimerosal, a mercury-based preservative, was removed from childhood vaccines in 2001. It is still used in the multi-dose vial of the adult influenza vaccine. None of the whooping cough vaccines (Tdap and DTaP) currently used in the United States contain thimerosal. Researchers have conducted extensive research and have found no link between the mercury previously used in vaccines and the risk of side effects, especially in pregnant women.[25, 29-31] Single dose vials of influenza are available that contain no Thimerosal.

REFERENCES

1. Centers for Disease Control and Prevention. Guidelines for vaccinating pregnant women. http://www.cdc.gov/vaccines/pubs/preg-guide.htm. Updated April 2013. Accessed November 5, 2019.
2. Centers for Disease Control and Prevention. Adult immunization schedules United States,. http://www.cdc.gov/vaccines/schedules/hcp/adult.html. . Accessed November 5, 2019.
3. Liang JL, Tiwari T, Moro P, et al. Prevention of Pertussis, Tetanus, and Diphtheria with Vaccines in the United States: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Recomm Rep 2018;67(No. RR-2):1–44. DOI: http://dx.doi.org/10.15585/mmwr.rr6702a1external icon-
4. Grohskopf LA, Alyanak E, Broder KR, Walter EB, Fry AM, Jernigan DB. Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2019–20 Influenza Season. MMWR Recomm Rep 2019;68(No. RR-3):1–21. DOI: http://dx.doi.org/10.15585/mmwr.rr6803a1external icon
5. Centers for Disease Control and Prevention. Pregnant women and Influenza (the flu). Updated October 21, 2019. Accessed November 5, 2019 https://www.cdc.gov/flu/highrisk/pregnant.htm
6. Centers for Disease Control and Prevention. Breastfeeding. Vaccinations. http://www.cdc.gov/breastfeeding/recommendations/vaccinations.htm, Updated January 24, 2018. Accessed November 5, 2019
7. Centers for Disease Control and Prevention. Pregnancy and whooping cough. http://www.cdc.gov/vaccines/vpd-vac/pertussis/tdap-pregnancy-hcp.htm. Updated June 29, 2017. Accessed November 5, 2019.
8. Centers for Disease Control and Prevention. Vaccine information statements. http://www.cdc.gov/vaccines/hcp/vis/index.html, Updated April 5, 2019. Accessed November 5, 2019.
9. Opel DJ, Heritage J, Taylor JA, et al. The architecture of provider-parent vaccine discussions at health supervision visits. *Pediatrics*. 2013;132(6):1037-1046. doi:10.1542/peds.2013-2037.
10. Association of State and Territorial Health Officials. Communicating effectively about vaccines: new communication resources for health officials. http://www.astho.org/WorkArea/DownloadAsset.aspx?id=5464. Published 2010. Accessed November 5, 2019.
11. Harrington JW. Vaccination refusal: how to counsel the vaccine-hesitant parent. *Consult Pediatr*. 2011;10(11). http://www.pediatricsconsultant360.com/content/vaccination-refusal-how-counsel-vaccine-hesitant-parent. Accessed March 5, 2014.
12. Healy CM, Pickering LK. How to communicate with vaccine-hesitant parents. *Pediatrics*. 2011;127(suppl 1):S127-S133. doi: 10.1542/peds.2010-1722S.
13. Centers for Diseases Control and Prevention. SHARE a strong vaccine recommendation. A series on standards for adult immunization practice. http://www.cdc.gov/vaccines/hcp/adults/downloads/standards-immz-practice-recommendation.pdf Updated May 2016. Accessed November 5, 2019.
14. Singer A. Making a CASE for vaccine safety: a new model for communicating with parents. Presented at: School of Public Health, University of Albany, December 9, 2010. http://www.albany.edu/sph/coned/phl/case.htm. Accessed March 5, 2014.
15. Healy CM, Pickering LK. How to communicate with vaccine-hesitant parents. *Pediatrics*. 2011;127(suppl 1):S127-S133. doi: 10.1542/peds.2010-1722S.
16. Centers for Disease Control and Prevention. A parent's guide to vaccines: part 4. Frequently asked questions. http://www.cdc.gov/vaccines/vac-gen/6mishome.htm. Updated October 26, 2015. Accessed November 5, 2019.
17. DeStefano F. Vaccines and autism: evidence does not support a causal association. *Clin Pharmacol Ther*. 2007;82(6):756-759. doi:10.1038/sj.clpt.6100407.
18. Offit PA, Jew RK. Addressing parents' concerns: do vaccines contain harmful preservatives, adjuvants, additives, or residuals? *Pediatrics*. 2003;112:(6 Pt 1):1394-1397.
19. Godlee F, Smith J, Marcovitch H. Wakefield's article linking MMR vaccine and autism was fraudulent. *BMJ*. 2011;342:c7452. doi: 10.1136/bmj.c7452.
20. World Health Organization. Immunization. Vaccination coverage. http://www.who.int/gho/immunization/en/. Published 2018. Accessed November 5, 2019
21. Centers for Diseases Control and Prevention. Pregnancy and whooping cough. http://www.cdc.gov/vaccines/adults/rec-vac/pregnant/whooping-cough/index.html. Updated May 7, 2013. Assessed April 2, 2014.
22. Centers for Disease Control and Prevention. Pertussis outbreak trends. http://www.cdc.gov/pertussis/outbreaks/trends.html. Updated March 4, 2014. Accessed March 5, 2014
23. Lloyd KL. Protecting pregnant women, newborns, and families from pertussis. *J Midwifery Womens Health.* 2013;58(3):288–296. doi:10.1111/jmwh.12045.
24. Tamma PD, Aul KA, del Rio C, Steinhoff MC, Halsey NE, Omer SA. Safety of influenza vaccination during pregnancy. *Am J Obstet Gynecol*. 2009;201(6):547-552. doi: 10.1016/j.ajog.2009.09.034.
25. Brown AS, Derkits, EJ. Prenatal Infection and Schizophrenia: A Review of Epidemiologic and Translational Studies. *Am J Psychiatry*. 2010;167(3):261-280. doi: 10.1176/appi.ajp.2009.09030361.
26. Rasmussen SJ, Jamieson DJ, Bresee JS. Pandemic Influenza and pregnant women. *Emerg Infect Dis*. 2008;14(1): 95-100. doi: 10.3201/eid1401.070667.
27. Offit PA, Quarles J, Gerber MA, et al. Addressing parents' concerns: do multiple vaccines overwhelm or weaken the infant's immune system? *Pediatrics*. 2002;109(1):124-129. doi:10.1542/peds.109.1.124.
28. American Academy of Pediatrics. Vaccine safety: examine the evidence. https://www.aap.org/en-us/Documents/immunization_vaccine_studies.pdf. Updated April 2013. Accessed November 5, 2019.
29. Price CS, Thompson WW, Goodson B, et al. Prenatal and infant exposure to thimerosal from vaccines and immunoglobulins and risk of autism. *Pediatrics*. 2012;126(4):656-664. doi: 10.1542/peds.2010-0309.
30. World Health Organization. Statement on thiomersal. http://www.who.int/vaccine_safety/committee/topics/thiomersal/statement_jul2006/en/. Published July 2006. Accessed November 5, 2019.

ADDITIONAL RESOURCES

Centers for Disease Control and Prevention.Measles, Mumps, Rubella, and Varicella diseases and how to protect against them. http://www.cdc.gov/vaccinesafety/Concerns/Autism/ Modified October 27, 2015. Accessed November 5, 2019.

Centers for Disease Control and Prevention. Understanding thimerosal, mercury, and vaccine safety. http://www.cdc.gov/vaccines/hcp/patient-ed/conversations/downloads/vacsafe-thimerosal-color-office.pdf. Reviewed February 2013. Accessed November 5, 2019.

Centers for Disease Control and Prevention. Vaccines for pregnant women. http://www.cdc.gov/vaccines/adults/rec-vac/pregnant.html. Updated August 23, 2013, Accessed March 5, 2014.

Centers for Disease Control and Prevention. What would happen if we stopped vaccinations? http://www.cdc.gov/vaccines/vac-gen/whatifstop.htm.Reviewed June 29, 2018. Accessed November 5, 2019

Diekema DS, American Academy of Pediatrics, Committee on Bioethics. Responding to parental refusals of immunization of children. *Pediatrics*. 2005;115(5):1428-1431.

Food and Drug Administration. Ensuring the safety of vaccines in the United States. http://www.fda.gov/downloads/BiologicsBloodVaccines/SafetyAvailability/VaccineSafety/UCM298181.pdf. Updated July 2011. Accessed November 2019.

March of Dimes. Vaccinations during pregnancy. http://www.marchofdimes.com/pregnancy/vaccinations-during-pregnancy.aspx. Reviewed April 2018. Accessed November 5, 2019.

This publication was made possible by cooperative agreement number 1U38OT000161 from the Centers for Disease Control and Prevention (CDC) and the Association of State and Territorial Health Officials (ASTHO). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC or ASTHO.