

## QUESTIONS From Symposium Participants

**Q:** Is there a resource on the CDC Web site to ask specific vaccine questions?

**A:** There is an e-mail address, [nipinfo@cdc.gov](mailto:nipinfo@cdc.gov), that's an invaluable resource because, for free, the CDC will answer questions. They also have a telephone number, 800-CDC-INFO, which clinicians can use or give to patients who have a lot of questions.

**Q:** If a woman who is eligible to receive the HPV vaccine already has HPV, should she still receive the vaccine?

**A:** In a woman who has HPV, it's not possible currently for a clinician to know how many of the subtypes she has. It could be one or all four subtypes in the quadrivalent vaccine. Therefore, the recommendation is to vaccinate women of the appropriate age, even those who have known HPV. In this way, women will be protected from the other subtypes to which they are susceptible.

**Q:** Should Tdap replace Td in the emergency department and urgent care?

**A:** Yes. This is analogous to using Td (tetanus and diphtheria toxoids) instead of the tetanus toxoid alone: coverage against more diseases is better. In the old days, wounded people received tetanus toxoid booster alone, but that left them susceptible to diphtheria so it has become routine to use Td. Now we need to upgrade to boosting with Tdap so they will be protected against pertussis, too. The barrier to this in some settings will be the difference in cost between Td and Tdap. In the future, there may be a recommendation to give Tdap every 10 years, just as Td is recommended now. It's currently not licensed that way because there aren't enough data.

**Q:** If the conjugated pneumococcal vaccine provides better immunity than the pure polysaccharide pneumococcal vaccine, why isn't it given to adults?

**A:** The conjugated vaccine only covers 7 serotypes, as opposed to the pure polysaccharide, which covers 23. Therefore, adults are still given the pure polysaccharide in order to protect them from more serotypes. Vaccine makers are looking at expanding the number of serotypes that the conjugated vaccine covers. There may soon be a 9-valent conjugated vaccine and eventually a 13-valent. Nonetheless, at present it is best to protect adults with the wider spectrum PPV23 vaccine.

**Q:** Will the varicella vaccine eliminate zoster in the future?

**A:** No, zoster cannot be eliminated. Once someone is infected with the varicella virus, it lives on in the nervous system in a latent state. There is a lower incidence of shingles following the varicella vaccine than following disease with wild type varicella, but even after vaccination, the vaccine virus (which is live) lives on as a latent virus.

**Q:** If a child is exposed to wild-type chickenpox and develops a mild case of chickenpox, is varicella vaccination necessary?

**A:** The worry is that people who get what looks like chickenpox may not actually have chickenpox. As clinicians have less and less knowledge of how chickenpox presents, this problem will be accentuated. So, unless it is confirmed as chickenpox, the patient should receive the vaccine to be sure that he or she is varicella immune.

**Q:** Should all immunizations for adults be given intramuscularly in the deltoid?

**A:** Most vaccines should be given intramuscularly, but there are vaccines (eg, MMR) for which the preferred route is subcutaneous. For details on the preferred route, see <http://www.immunize.org/catg.d/p2011.pdf>. No vaccine should be given into a fat pad, which is one reason that the gluteus is not a good site for vaccination.

**Q: What is the definition of immunocompromised? Do medications like prednisone, methotrexate, and tumor necrosis factor inhibitors make patients ineligible for live vaccines?**

**A:** Immunosuppressive medications make patients ineligible for vaccination with a live virus vaccine. Note that a 5-day burst of steroids—commonly prescribed to control an asthma exacerbation—is not immunosuppressive, so this course of treatment is not a contraindication to use of live virus vaccines. (Remember: The reason it's just a 5-day course of steroids is so that it's stopped before it becomes an immunosuppressive dose.) Also, patients receiving nasal steroids or every-other-day steroids are eligible for live virus vaccines because these courses are not immunosuppressive. People on parenteral high-dose steroids, 20 mg/kg or more, for more than 5 days should not receive the live virus vaccines.

**Q: How about a parent with rheumatoid arthritis taking a daily dose of prednisone? They are truly immunosuppressed. If they have a child who gets live virus vaccine, what precautions should be taken?**

**A:** Children who live with immunosuppressed (or pregnant) adults should still be vaccinated. With the MMR vaccine, there is no risk of spreading disease from an immunized child to an immunosuppressed adult. If a patient gets the varicella vaccine and develops a rash, it is recommended that the rash be covered. Unlike wild-type varicella virus that is spread both by the vesicular fluid and by oropharyngeal secretions, the varicella vaccine virus is only spread through the post-vaccine rash. So, the rash should be covered with gauze as a precaution.

**Q: If a patient receives the hepatitis A vaccine before a trip and forgets to get the second dose, what should they do?**

**A:** That is common. The patient who receives only one dose before travel should get a second dose as soon as they return from the trip. The series should not be restarted; a second dose should be given.

**Q: Do vaccines or their preservatives cause autism?**

**A:** The measles, mumps, rubella vaccine does not cause autism. In Denmark where they have a system of socialized medicine, researchers looked at records of 500,000 children. They compared those children who received MMR and those who did not and found that there was no difference in the rate of autism in those 2 groups.

When they looked at children who had received vaccines with thimerosal and children who had not, they again found no difference in the rate of autism. That is pretty strong evidence. In the US, the Institute of Medicine looked at many studies and came up with the same result.

There is also concern about too many vaccines being given at a young age. Healthcare providers should be wary about spacing the vaccines more because it leaves the child vulnerable for longer, and many of these vaccines are most important for the youngest children. The longer you wait, the longer they remain vulnerable to deadly diseases.

Are children getting too many vaccines? Children's immune systems are very robust. Immunologists tell us that an infant, when born, could take 10,000 vaccines at a time and not have their immune system overwhelmed. We should remember that vaccines today are better than 50 years ago, and that the number of antigens in the vaccines today is less than the number of antigens years ago, although the number of diseases covered by the vaccines is greater.