

Public Health Live! April 2019

What You Should Know About Adult Immunization
Audience Questions and Answers from David Kim, MD, CDC

Question: Why do adults preparing immigration paperwork have to have 2 TDAPs a month apart?

Answer: Adult immigrant visa applicants are required to be current on the Advisory Committee on Immunization Practice (ACIP) recommendations except for HPV and zoster vaccinations (HPV and zoster do not cause outbreaks). As such, they should receive one dose of Tdap if they have not received it already. Please let me know if the 2-dose Tdap practice is systemic or widespread as a corrective action might be necessary.

Q: How long do we expect the hepatitis A vaccine to be effective?

A: Modeling based on studies on long-term protection show that protective levels of anti-HAV could be present for >25 years in adults and >14-20 years in children (Van Damme et al. Lancet 2003; 362:1065-71). There is no recommendation for a booster dose of hepatitis A vaccine.

Q: To clarify: for the 22yo who had influenza and developed Guillaine Barre (GB), it was due to having the flu, not as result of receiving the vaccine? Can you address the concerns about developing GB as a result of vaccines?

A: Thank you for bringing this up. The scenario that was discussed did NOT associate Guillain-Barré Syndrome (GBS) with the influenza vaccination. The recommendation is that GBS within 6 weeks following a previous dose of any type of influenza vaccine is considered a precaution to vaccination (Grohskopf et al. MMWR 2018; 67(3): 1–20). People who are not at higher risk for severe influenza complications and are **known to have experienced GBS** within 6 weeks of a previous influenza vaccination generally should not be vaccinated. However, the benefits of influenza vaccination might outweigh the risks for certain persons who have a history of GBS and who also are at higher risk for severe complications from influenza. The estimated risk for GBS is low (~1 additional case per 1 million vaccinated). The incidence of GBS among the general population is low (10-20 new cases per million annually), but people with a history of GBS have a substantially greater likelihood of subsequently experiencing GBS than people without such a history (Grohskopf et al. MMWR 2013; 62 (RR07): 1-43). Thus, the likelihood of coincidentally experiencing GBS after influenza vaccination is expected to be greater among people with history of GBS than among people with no history of GBS. Whether influenza vaccination specifically might increase the risk for recurrence of GBS is unknown.

Q: Is the shingles vaccine given every year or once in a lifetime?

A: The shingles vaccine is given once in a lifetime. RZV/Recombinant zoster vaccine (2-dose recombinant vaccine) at age 50+, or RZV or ZVL/Live zoster vaccine (1 dose live vaccine) at age 60+. RZV is preferred over ZVL.

Q: If an adolescent receives a Tdap booster shot around 15-18 years of age and she becomes pregnant in her early 20s, would she receive an additional Tdap vaccination while pregnant?

A: Yes. She should receive a dose of Tdap in the early part of the third trimester for this pregnancy (and future pregnancies). Although she's fully protected (against pertussis) with her Tdap at age 15, future doses of Tdap in pregnancies are to protect the baby until s/he is old enough to get vaccinated.

Q: Could you explain why vaccinating a pregnant women in the third trimester protects the newborn infant and why this is recommended with every pregnancy?

A: Administering Tdap to a pregnant woman is to provide the mom with direct immunity and the baby with indirect immunity against pertussis. Without this passive immunity, the baby will be unprotected in the first months of life when s/he is too young to get vaccinated. Babies of vaccinated moms are born with significantly higher anti-pertussis antibodies if Tdap given in pregnancy weeks 27–36 (optimal transfer of higher vaccine-induced antibodies from mom to baby).

Q: When I was a baby, I had a severe allergic reaction to receiving the pertussis vaccine. Do I need another dose of this or is it a once-in-a-lifetime vaccine, and what are my options for future vaccination if needed?

A: It goes without saying that a severe allergic reaction to a vaccine is a contraindication for future vaccination with that vaccine. But given that the vaccine used for pertussis is a combination vaccine (diphtheria, tetanus, and pertussis), I'm not sure how you were able to pinpoint pertussis. Regardless, given the information you provided, it appears that you should avoid Tdap (and stick with Td every 10 years). Should you develop a respiratory illness not unlike pertussis (essentially persistent cough), make sure you inform your provider with your (lack of) pertussis vaccination history. You should talk with your provider (as cop-out-y as this sounds) as s/he needs to put your situation in appropriate context.

Q: Do any of these vaccines cause the disease they prevent? For example, does the flu vaccine use live viruses, or increase your risk of getting the flu?

A: No, except for live vaccines, as you pointed out. Live vaccines (e.g., varicella vaccine) have the potential to cause the disease they prevent in certain populations (e.g., severely immunocompromised persons) or have the potential to cause harm in pregnancy. As such, live vaccines are contraindicated in certain situations.

Refer to the immunization schedules - <https://www.cdc.gov/vaccines/schedules/hcp/index.html>, and General Best Practice Guidelines for Immunization ("Pink Book") - <https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html> (see the section "Contraindications and Precautions") for details.

Q: Please comment on the influenza vaccination rates by age groups, in particular the rates in the younger adult population highlighted by the case study.

A: Older adults have higher influenza vaccination rates than younger adults. I recommend that you check out FluVaxView - <https://www.cdc.gov/flu/fluview/index.htm>. It has a wealth of information on influenza vaccination coverage data.

Q: Is there a site to visit that consolidates the recommended vaccine timelines of when to receive initial and booster doses?

A: The ACIP website - <https://www.cdc.gov/vaccines/acip/recommendations.html> contains current immunization recommendations.

The adult (and child and adolescent) immunization schedule can be found at - <https://www.cdc.gov/vaccines/schedules/hcp/index.html>.

The CDC immunization schedule app can be found at <https://www.cdc.gov/vaccines/schedules/hcp/schedule-app.html>.