

## ACIP Releases 2014 Adult Immunization Schedules

**Guideline source:** Centers for Disease Control and Prevention, Advisory Committee on Immunization Practices

**Evidence rating system used?** No

**Literature search described?** No

**Guideline developed by participants without relevant financial ties to industry?** Not reported

**Published source:** *Morbidity and Mortality Weekly Report*. In press.

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A collection of Practice Guidelines published in *AFP* is available at <http://www.aafp.org/afp/practguide>.

The 2014 immunization schedule for adults from the Advisory Committee on Immunization Practices (ACIP) has a few changes that are particularly relevant to family physicians. The schedule is available at <http://www.aafp.org/patient-care/immunizations/schedules.html>.

With regard to the influenza vaccine, a study has demonstrated that high-dose Fluzone, which is approved for patients 65 years and older, is 24% more effective (regarding relative risk) than regular-dose Fluzone in older adults. The original U.S. Food and Drug Administration approval for high-dose Fluzone was based on data that showed that the antibody response was significantly higher, but this new study shows that the high-dose vaccine is also more effective in the real world. High-dose Fluzone has more adverse effects than regular-dose Fluzone.

To put these benefits and adverse effects in context, if you compare 1,000 patients in the high-dose Fluzone group with 1,000 patients in the regular-dose Fluzone group, you would have 4.6 fewer cases of influenza. However, for every 1,000 doses of high-dose Fluzone, there would be the following extra adverse effects: 110 cases of mild pain, 40 cases of redness, 30 cases of swelling, 30 cases of myalgia, 40 cases of malaise, 25 cases of headache, and 15 cases of fever.

Family physicians should be able to order more injectable quadrivalent influenza vaccine for the 2014-2015 season. Unlike this current season, the quadrivalent

formulation should be readily available for preorder in the spring. Finally, physicians should remember that Flublok is a recombinant DNA influenza vaccine that does not use eggs in the production process. It is approved for adults 18 to 49 years of age and safe to use in patients allergic to eggs.

Tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis (Tdap) revaccination appears to be safe and effective, but the pertussis protection wanes quickly, going from 98% effective at one year to 71% effective at five years. However, the pertussis work group is not recommending a second dose of Tdap because the cost-benefit ratio was judged to be poor. If a tetanus booster is needed and a patient has had Tdap in the past, the recommended booster is tetanus and diphtheria toxoids (Td). The only exception is pregnant women, who should be given the Tdap vaccine with each pregnancy, optimally between 27 and 36 weeks of gestation.

The human papillomavirus (HPV) work group provided data showing a decrease in warts and abnormal Papanicolaou smear results for patients receiving HPV vaccine. The assumption is that over time, this will translate into fewer cervical cancers, but the studies are ongoing. In addition, the Merck pregnancy registry for the quadrivalent papillomavirus vaccine (Gardasil) did not show any increased risk of spontaneous abortion, fetal death, or congenital anomalies. HPV coverage is still poor, with only 50% of adolescent girls receiving one dose, and only 30% receiving all three doses. The HPV vaccination rates for three doses are around 30% for young adult women.

Overall adult vaccination rates are poor, ranging from 15% for the herpes zoster vaccine to 50% to 60% for pneumococcal and tetanus vaccines. We have a long way to go towards protecting our adult patients against vaccine-preventable diseases.

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