

PRACTICE ALERT

Public health issues influencing your practice

**Doug Campos-Outcalt,
MD, MPA**Department of Family and
Community Medicine,
University of Arizona College
of Medicine, Phoenix

Are you up to date with new immunization recommendations?

Vaccines are one of the most important and effective tools for protecting the health of the public and family physicians are instrumental in insuring that vaccine recommendations are implemented. With the development of new vaccines come increasingly complex recommendations. Staying current is challenging.

This column describes the most recent changes to the immunization schedules made by the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention (CDC).

■ Hepatitis A

Universal vaccination with hepatitis A virus (HAV) vaccine is now recommended for all children between their first and second birthdays, with 2 doses of vaccine given 6 months apart.

Previously, universal vaccination was recommended only for states and population groups known to have a high prevalence of infection. The recommended age for vaccination varied depending on local circumstances, but the vaccine was not approved for use before the second birthday. Because of the marked success in reducing hepatitis A infection rates in high-prevalence areas, most HAV cases now occur in states without routine vaccination recommendations.

Each year, 5000 to 7000 cases of hepatitis A are reported, and it is estimated that 4 times that number of symptomatic cases occur. The ACIP's new recommendation is based on recent approval of HAV vaccine for use starting at age 1 year, and on the expected doubling of disease reduction from routine, universal vaccination of children. Moreover, universal vaccination of children is expected to reduce hepatitis A incidence among adults because children often are the source of infection transmission to older family members.

Keep in mind that HAV vaccination for children age 2 to 18 years may still be recommended in your area depending on local circumstances and disease epidemiology.

■ Hepatitis B

The ACIP recommends that the first dose of hepatitis B vaccine (HepB) routinely be given to newborns before hospital discharge. This first dose in the 3-dose series should be monovalent HepB and should be delayed only if a physician so orders and if the mother is documented to be hepatitis surface antigen negative. This recommendation is the latest addition to the national strategy to eliminate hepatitis B virus transmission in the United States.¹

CORRESPONDENCEDoug Campos-Outcalt, MD,
MPA, 4001 North Third Street
#415, Phoenix, AZ 85012.
E-mail: dougco@u.arizona.edu

■ Pertussis

A Practice Alert column last year described the re-emergence of pertussis and the licensure of tetanus and diphtheria toxoid and acellular pertussis (Tdap) products for use in adolescents and adults.² There are now 5 new recommendations regarding the use of Tdap.

1. A single dose of Tdap should replace the next dose of Td for adults aged 19 to 64 years as part of the every-10-year Td boosting schedule.

2. A single dose of Tdap should be administered to adults who have close contact with infants less than 6 months of age. The optimal interval between Tdap and the last Td is 2 years or greater, but shorter intervals are acceptable.

3. Women of childbearing age should receive Tdap before conception or postpartum, if they have not previously received Tdap. Tdap is not approved for use during pregnancy.

4. All adolescents aged 11 to 12 should receive a single dose of Tdap.

5. Adolescents aged 13 to 18 should receive Tdap if they received the last Td more than 5 years previously, or in less than 2 years for special circumstances such as close contact with an infant or in an outbreak.

There are only 2 contraindications to the use of Tdap: a history of anaphylactic reaction to a Tdap vaccine component, or a history of encephalopathy within 7 days of receiving a pertussis vaccine that cannot be attributed to another cause. Precautions include Guillain-Barré syndrome less than 6 weeks after a previous dose of tetanus toxoid, moderate or severe acute illness (with or without fever), unstable neurologic condition, or a history of an Arthus hypersensitivity reaction after a dose of tetanus or diphtheria toxoid.

With the new recommendation for Tdap at age 11 to 12 years, 2 vaccines are now indicated for this age group—the other being quadrivalent meningococcal

TABLE

Recent immunization recommendations by age group

INFANTS AND CHILDREN

Hepatitis B vaccine (HepB) as monovalent HepB before discharge from the hospital unless order otherwise by a physician and the mother is documented to be hepatitis B surface antigen negative.

Universal, routine vaccination with hepatitis A vaccine between age 1 to 2 years with 2 doses 6 months apart.

ADOLESCENTS

Tdap at age 11 to 12 years.

Tdap at age 13 to 18 years if the last Td was administered >5 years previously and no previous Tdap administered. In special circumstances the interval from the last Td can be less than 5 years.

Wellness visit at age 11 to 12 years to administer both Tdap and meningococcal vaccines.

ADULTS

Tdap to replace the next scheduled Td booster, one time only.

Tdap as single dose for adults caring for children less than age 6 months.

PREGNANT WOMEN

Screen for varicella immunity in those without proof of immunity. Immunize postpartum those nonimmune.

Tdap either during preconception period or immediately postpartum, if no Tdap previously received.

vaccine.³ The ACIP recommends a wellness visit at this age to facilitate these immunizations.

■ Varicella

Varicella immune globulin is no longer produced. Post-varicella-exposure prophylaxis is recommended for those who do not have varicella immunity and who are likely to get severe varicella disease. These include immunocompromised persons, neonates, premature infants, and pregnant women. The ACIP now recommends intravenous immune globulin for these situations.

PRACTICE ALERT

ACIP also recommends that pregnant women with no proof of varicella immunity be screened with a blood test during pregnancy, and those found to be nonimmune should receive varicella vaccine postpartum with the second dose 4 to 8 weeks later. Proof of immunity consists of a history of documented varicella infection or herpes zoster, age-appropriate vaccination, being born before 1966, or a positive serology result for varicella antibody.

A measles-mumps-rubella-varicella combination vaccine (MMRV) is now available and can cut down on the number of injections needed to complete child vaccination recommendations. It will also stimulate more discussion about the potential advantages of a second varicella dose for children under age 13 years, which is currently not recommended.

The **TABLE** summarizes these new vaccine recommendations by age group. The complete immunization schedule for children and adults can be located on the CDC Web site.^{4,5} These schedules can be printed and placed in clinic setting to assist physicians and staff to competently fulfill one their most important public health functions, insuring the full immunization of their patient populations. ■

REFERENCES

1. A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States. *MMWR Recomm Rep* 2005; 54(RR-16):1-23. Available at: www.cdc.gov/mmwr/preview/mmwrhtml/rr5416a1.htm?s_cid=rr5416a1_e. Accessed on February 7, 2006.
2. Campos-Outcalt D. Pertussis: A disease re-emerges. *J Fam Pract* 2005; 54:699-703.
3. Campos-Outcalt D. Meningococcal vaccine: new product, new recommendations. *J Fam Pract* 2005; 54:324-326.
4. CDC. Recommended childhood and adolescent immunization schedule. United States, 2006. Available at: www.immunize.org/cdc/child-schedule.pdf. Accessed on February 7, 2006.
5. CDC. Recommended adult immunization schedule, by vaccine and age group. United States, October 2005—September 2006. Available at: www.cdc.gov/nip/recs/adult-schedule.pdf. Accessed on February 7, 2006.