

NEEDLE TIPS

from the Immunization Action Coalition — www.immunize.org

AAP reaffirms its policy for mandatory influenza vaccination of health-care personnel. IAC's Influenza Vaccination Honor Roll approaches 600.

In the October issue of the journal *Pediatrics*, the American Academy of Pediatrics (AAP) issued its updated vaccination policy statement titled “Influenza Immunization for All Health Care Personnel: Keep It Mandatory.” In the policy’s introduction, AAP states, “Mandatory influenza immunization programs for all HCP [health care personnel] should be implemented. During the 2013 and 2014 influenza season, 36% of all HCP and 58% of HCP working in hospitals reported an influenza vaccination requirement at their institution. Mandating influenza vaccine for all HCP is ethical, just, and necessary.” The full policy statement is available at <http://pediatrics.aappublications.org/content/early/2015/09/01/peds.2015-2922.full.pdf>.

In October 2010, AAP was among the earliest healthcare societies to issue a policy statement supporting the adoption of mandatory influenza vaccination of HCP. Currently, the list of national societies with policies for mandatory influenza vaccination of HCP includes:

- American Academy of Family Physicians
- American College of Physicians
- American Hospital Association
- American Medical Directors Association
- American Pharmacists Association
- American Public Health Association
- Association for Professionals in Infection Control and Epidemiology
- Infectious Diseases Society of America
- National Association of County and City Health Officials
- National Business Group on Health
- National Patient Safety Foundation
- Pediatric Infectious Diseases Society of America
- Society for Healthcare Epidemiology

More information about these mandatory influenza vaccination policies, as well as links to the policy statements, is included in IAC’s 2-page summary titled “First Do No Harm: Mandatory Influenza Vaccination Policies for Healthcare Personnel Help Protect Patients” featured on page 11 of this issue of *Needle Tips*.

IAC's Honor Roll for Mandatory Influenza Vaccination of Healthcare Personnel

In October 2009, IAC launched its “Honor Roll for Mandatory Influenza Vaccination of Health-

care Personnel” at www.immunize.org/honor-roll/influenza-mandates. Created to recognize healthcare systems, hospitals, and practices that mandate influenza vaccination of staff, the IAC press release issued at launch recognized the Infectious Diseases Society of America, the first professional society to issue such a policy statement, as well as Barnes Jewish Corporation (BJC) HealthCare, Missouri; Children’s Hospital of Philadelphia; Creighton University; Hospital of the University of Pennsylvania; Loyola University Health System, Illinois; MedStar Health, Maryland and Washington, DC; TriHealth, Good Samaritan and Bethesda North Hospitals, Cincinnati, Ohio; University of Iowa Hospitals; and Virginia Mason Medical Center, Seattle. Since 2009, nearly 600 organizations have been added to the honor roll ranks.

How to Apply for the Honor Roll

To be added to the honor roll, an organization must (1) require influenza vaccination for staff and (2) include strong measures (e.g., a mask requirement, reassignment to non-patient care, or dismissal) to prevent transmission of influenza to patients from staff who cannot or will not get vaccinated. Find out more about the honor roll and how to apply at www.immunize.org/honor-roll/influenza-mandates.



valent (contain four strains of influenza virus) rather than trivalent (three strains). You can find information on all influenza vaccines available in the U.S. for the current season and the age groups approved by FDA by going to the Immunization Action Coalition’s (IAC) information sheet titled “Influenza Vaccine Products for the 2015–2016 Influenza Season” available at www.immunize.org/catg.d/p4072.pdf.

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Ask the Experts

The Immunization Action Coalition extends thanks to our experts, medical officer Andrew T. Kroger, MD, MPH, and nurse educator Donna L. Weaver, RN, MN, both with the National Center for Immunization and Respiratory Diseases at the Centers for Disease Control and Prevention (CDC).

Influenza vaccines

Which influenza vaccines are available for this influenza season?

Multiple manufacturers are producing influenza vaccine for the U.S. market for the 2015–2016 season. Inactivated, recombinant (inactivated), and live attenuated vaccines are being produced using egg-based, cell culture-based, and recombinant technologies. The live attenuated vaccine and some of the inactivated influenza vaccines are quadri-

Immunization questions?

- ▶ Email nipinfo@cdc.gov
- ▶ Call your state health department (phone numbers at www.immunize.org/coordinators)

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Which influenza vaccines can we give to children?

Among the injectable inactivated influenza vaccines (IIV), only Fluzone (Sanofi) is approved by the FDA for use in children ages 6 through 35 months, using the 0.25 mL dose. However, there are several injectable influenza vaccines that can be given to children age 3 years or older.

The nasal spray live attenuated influenza vaccine (LAIV, FluMist, MedImmune) is approved for healthy children age 2 years and older. Consult IAC's chart on all influenza vaccines available in the U.S. this season at www.immunize.org/catg.d/p4072.pdf.

Is it acceptable to administer a dose of the quadrivalent influenza vaccine to a patient who has already received the trivalent vaccine?

No. CDC's Advisory Committee on Immunization Practices (ACIP) does not recommend more than 1 dose of influenza vaccine in a season, except for certain children age 6 months through 8 years for whom 2 doses are recommended.

How late in the season can I vaccinate my patients with influenza vaccine?

Peak influenza activity generally occurs in January or February. Providers should continue vaccinating patients throughout the influenza season, including into the spring months (for example, through May), as long as they have unexpired vaccine in stock and unvaccinated patients in their office.

Because influenza occurs in many areas of the world during April through September, vaccine should be given to travelers who missed vaccination in the preceding fall and winter. Another late season use of vaccine is for children age 6 months through 8 years who need 2 doses of vaccine but failed to get their second dose. For each of these situations, vaccine can be given through the month of June since most injectable influenza vaccine has a June 30 expiration date.

If an unvaccinated patient who has just recovered from a diagnosed case of influenza comes into our clinic, should we vaccinate this patient?

Yes. Influenza vaccine contains three or four influenza vaccine virus strains; two A viruses and one or two B viruses, which are prepared based on circulating viruses from the previous influenza season. Infection from one virus type does not confer immunity to other types and it would not be unusual to be exposed

IAC's "Ask the Experts" team from the Centers for Disease Control and Prevention



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to more than one type during a typical influenza season, so a person who has recently had influenza will benefit from receipt of a vaccine that contains additional influenza virus strains.

Can LAIV be given to a child with asthma?

Asthma or a wheezing episode noted in the medical record within the past 12 months is considered a contraindication to the use of LAIV for children ages 2 through 4 years. For people age 5 years and older, asthma is considered to be a precaution (not a contraindication) for the use of LAIV.

When a child needs 2 doses of influenza vaccine, can I give 1 dose of each type (injectable and live attenuated)?

Yes. As long as a child is eligible to receive live attenuated influenza vaccine (at least 2 years of age and healthy), it is acceptable to give 1 dose of each type of influenza vaccine. The doses should be spaced at least 4 weeks apart.

A 5-year-old child received her second MMR a week ago. How long should she wait before receiving LAIV?

LAIV can be administered simultaneously with another live vaccine (for example, MMR, varicella), but if not given at the same time, ACIP recommends waiting four weeks before administering the second live vaccine.

A study published in 2014 found that the injectable vaccine Fluzone High-Dose (Sanofi) protects people 65 years and older better than

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standard-dose Fluzone. Does ACIP preferentially recommend use of Fluzone High-Dose for all people age 65 years and older?

Aging decreases the body's ability to develop a good immune response after getting influenza vaccine, which places older people at greater risk of severe illness from influenza. A higher dose of antigen in the vaccine should give older people a better immune response and therefore provide better protection against influenza. However, despite published evidence of better protection from Fluzone High-Dose when compared to standard-dose Fluzone (*N Engl J Med* 2014; 371:635-45), ACIP has not stated a preference for this vaccine for people age 65 years and older.

May I give Fluzone High-Dose to patients younger than age 65 years?

No. Fluzone High-Dose is licensed only for people age 65 years and older and is not recommended for younger people.

Sometimes patients age 65 years and older who have received the standard-dose influenza vaccine hear about Fluzone High-Dose and want to receive that, too. Is this okay to administer?

No. ACIP does not recommend that anyone receive more than 1 dose of influenza vaccine in a season except for certain children age 6 months through 8 years for whom 2 doses are recommended.

Would giving an older patient 2 doses of standard-dose influenza vaccine be the same as administering the high-dose product?

No, and this is not recommended.

Is LAIV contraindicated for adults with asthma?

Asthma is a precaution for LAIV in people 5 years of age and older.

What is the preferred anatomic site for administration of inactivated influenza vaccine (IIV)?

With the exception of intradermal vaccine (Fluzone Intradermal, Sanofi), IIV should be administered in the anterolateral thigh muscle of an infant or young child and in the deltoid muscle of an older child, adolescent, or adult. The anterolateral thigh muscle can also be used for an older child, adolescent, or adult if necessary. It is critical that intramuscular influenza vaccine be injected into a muscle. Influenza vaccination season is an opportune time to review proper intramuscular

injection techniques with your staff. IAC has prepared a handout on how to administer intramuscular vaccine injections (available at www.immunize.org/catg.d/p2020.pdf) that can be used as a staff training tool.

We offer healthcare professionals live attenuated influenza vaccine (LAIV) but question whether newborn intensive care unit (NICU) staff can receive this vaccine without compromising neonates.

Neonates in an NICU are not considered severely immunocompromised. NICU personnel may receive LAIV if otherwise eligible (younger than 50 years, healthy, and not pregnant).

Should staff at drive-through influenza vaccination clinics encourage drivers to park and wait for 15 minutes after vaccination to make sure they don't have a vaccination reaction or syncopal (fainting) episode?

Yes. Syncope has been reported following vaccination. It is prudent for all persons to be observed for syncope for at least 15 minutes after vaccination.

We inadvertently administered a 0.5 mL dose of FluLaval (GlaxoSmithKline) to a 2-year-old before realizing that the vaccine is only licensed for use in people age 3 years and older. Do we need to repeat the dose with an age-appropriate product?

No, the dose does not need to be repeated. However, two errors actually occurred here. In addition to the age discrepancy, the child also received a 0.5 mL dose of vaccine rather than the correct dose (0.25 mL) for the child's age. Clinicians should carefully select an influenza vaccine that is licensed for the age group of the person being vaccinated. Fluzone 0.25 mL (Sanofi) is the only inactivated influenza vaccine approved for use in children age 6 months through 2 years. The live attenuated nasal spray vaccine (LAIV) is approved for use in most healthy children age 2 years and older (as well as for healthy nonpregnant adults through age 49 years).

If the child should need a second dose of influenza vaccine, an age-appropriate vaccine should be selected. The Immunization Action Coalition's educational piece titled "Influenza Vaccine Products for the 2015-2016 Influenza Season" (available at www.immunize.org/catg.d/p4072.pdf) provides helpful information on the wide variety of influenza vaccines in use this season.

Some of our patients believe that they have had reactions to influenza vaccine in the past, and request the dose to be split into 2 doses administered on different days. Is this an acceptable practice?

This is definitely not an acceptable practice. Doses of influenza vaccine (or any other vaccine) should never be split into "half doses." If a "half dose" is given, it should not be accepted as a valid dose and should be repeated as soon as possible with a full age-appropriate dose.

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The pneumococcal conjugate vaccine (PCV13, Prevnar, Pfizer) package insert says that in adults, antibody responses to PCV13 were diminished when given with inactivated influenza vaccine. Does this mean we should not give PCV13 and influenza vaccine at the same visit?

The available data have been interpreted that any changes in antibody response to either of the vaccines' components were clinically insignificant. If PCV13 and influenza vaccine are both indicated and recommended they should be administered at the same visit. See the PCV13 ACIP recommendations at www.cdc.gov/mmwr/pdf/wk/mm6337.pdf, page 824.

Do statin medications (taken to lower blood lipid levels) affect the efficacy of influenza vaccine?

Two recent studies raise the possibility that statin medications may blunt the effectiveness of influenza vaccines in seniors. Experts caution that more research is needed to better understand the issue. Because of their benefit, seniors should not stop taking their statin without consultation with their health care provider. Influenza vaccine remains the best protection we have against influenza, and provides at least some protection in people who take statins, so patients should still receive an influenza vaccine to be protected. There is no change to the ACIP recommendation for influenza vaccine.

Pneumococcal vaccines

Do patients who were vaccinated with 1 or 2 doses of PPSV23 before age 65 need an additional dose of PPSV23 at age 65?

Yes. Patients who received 1 or 2 doses of PPSV23 for any indication at age 64 years or younger should receive an additional dose of PPSV23 vaccine at age 65 years or older if at least 5 years have elapsed since their previous PPSV23 dose. Patients age 65 years and older who have not already received a dose of pneumococcal conjugate vaccine (PCV13) will need this as well. PCV13 is routinely recommended at age 65 and PPSV23 is administered one year later.

Should a healthy 75-year-old patient who was given PPSV23 at age 65 years be revaccinated?

No. Adults who were first vaccinated at age 65 years or older do not require revaccination. Make

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sure they have also received a dose of PCV13, which is routinely recommended at age 65 years.

Can we administer PCV13 and PPSV23 to a person 65 years of age or older at the same visit? If not, what is the recommended interval between doses?

PCV13 and PPSV23 should not be given at the same visit. Healthy people 65 years of age and older should receive PCV13 first, followed by a dose of PPSV23 one year later. If the patient has a high-risk medical condition (such as immunocompromised or asplenia) the first PPSV23 dose can follow the PCV13 dose by 8 weeks.

Rather than giving PCV13 first and waiting 8 weeks to give PPSV23 as recommended for an immunocompromised child (2 years or older) or adult patient, we inadvertently gave both vaccines at the same visit. We are looking for guidance.

Although PCV13 and PPSV23 should not be administered at the same visit, CDC does not recommend repeating either vaccine dose should this occur. You should inform the patient of the error and let them know that they will not need to repeat either dose.

What is the recommended interval between doses for adult patients who have already received 1 dose of PPSV23 and now need PCV13?

For patients who have already had one or more doses of PPSV23, it is recommended to wait at least a year after PPSV23 before administering

PCV13. If the patient is recommended to receive a second dose of PPSV23, delay that second PPSV23 dose at least 8 weeks following PCV13 and 5 years or more following the first dose of PPSV23.

If patients who are in a recommended risk group for PPSV23 or PCV13 aren't sure if they have previously received these vaccines, should health care providers vaccinate them?

If patients do not have a documented vaccination history for these two vaccines and their records are not readily obtainable, you should administer the recommended doses. Extra doses will not cause harm to the patient.

If influenza vaccine is recommended for healthcare workers to protect high-risk patients from getting influenza, why aren't pneumococcal vaccines also recommended?

Influenza virus is easily spread from healthcare workers to their patients, and infection usually leads to clinical illness. Pneumococcus is probably not spread from healthcare workers to their patients as easily as is influenza, and infection with pneumococcus does not necessarily lead to clinical illness. Host factors (such as age and underlying illness) are more important in the development of invasive pneumococcal disease than nasopharyngeal colonization with the organism. When you're giving influenza vaccine to your patients in the fall, don't forget to assess their need for pneumococcal vaccines as well as all other vaccines, including Tdap and zoster.

Ask the Experts

About IAC's Question of the Week

Each week, *IAC Express* highlights a new, topical, or important-to-reiterate Q&A. This feature is a cooperative venture between IAC and CDC. William L. Atkinson, MD, MPH, IAC's associate director for immunization education, chooses a new Q&A to feature every week from a set of Q&As prepared by experts at CDC's National Center for Immunization and Respiratory Diseases.

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