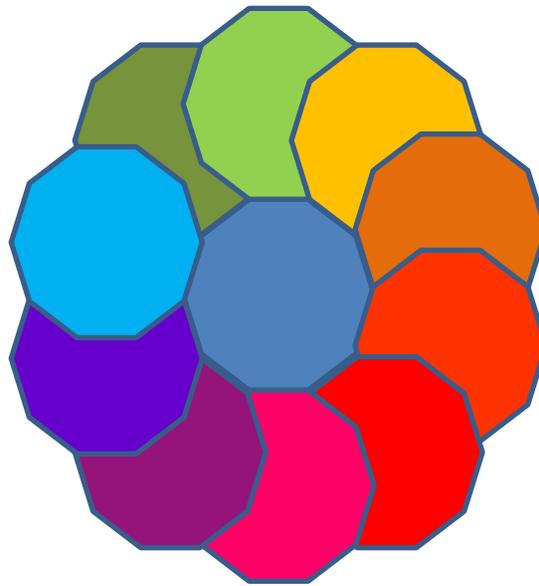


Influenza Implementation Guidance

For Pediatricians, Physicians, Nurse Practitioners,
Physician Assistants, Nurses, Medical Assistants, and
Office Managers



American Academy of Pediatrics
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Influenza Implementation Guidance

For Pediatricians, Physicians, Nurse Practitioners, Physician Assistants, Nurses, Medical Assistants, and Office Managers

This implementation guidance is designed to help practitioners and pediatric office staff prevent influenza by delivering influenza vaccine according to the [AAP Policy Statement: Recommendations for Prevention and Control of Influenza in Children, 2017-18](#). The guidance includes information for physicians, nurse practitioners, physician assistants, nurses, medical assistants, office managers, and other office staff.

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The recommendations in this publication do not indicate an exclusive course of treatment or serve as a standard of medical care. Variations, taking into account individual circumstances, may be appropriate.

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Index of Acronyms and Terms

Acronyms

AAP: American Academy of Pediatrics

ACA: Affordable Care Act

ACIP: Advisory Committee on Immunization Practices

ASP: Average Sales Price

AWP: Average Wholesale Price

CDC: Centers for Disease Control and Prevention

CPT: Current Procedural Terminology

EHR: Electronic Health Record

FDA: Food and Drug Administration

IIS: Immunization Information System

ICD-9-CM: International Classification of Diseases, Ninth Revision, Clinical Modification

ICD-10-CM: International Classification of Diseases, 10th Revision, Clinical Modification

IIV: Inactivated Influenza Vaccine (injectable)

LAIV: Live Attenuated Influenza Vaccine (nasal spray)

PPE: Pediatric Patient Education

VFC: Vaccines for Children

VICP: Vaccine Injury Compensation Program

VIS: Vaccine Information Statement

Terms

Intramuscular (IM): injection of a substance directly into a muscle.

Nasal: referring to the nose.

Subcutaneous (SQ): needle inserted just under the skin. Vaccine can then be delivered into subcutaneous tissues.

Thimerosal: mercury-based preservative that has been used to prevent contamination of vaccines with bacteria and fungi.

Important Reminders

The [Centers for Disease Control and Prevention Advisory Committee on Immunization Practices \(ACIP\) has continued its recommendation that LAIV should not be used in the 2017-2018 season](#). The [AAP supports this recommendation](#), and therefore, LAIV will not be discussed in this guidance.

Annual Influenza Policy

Policy for the prevention and control of influenza is updated every year by both the American Academy of Pediatrics (AAP) and the Centers for Disease Control and Prevention (CDC). The AAP statement is pediatric-focused, while the CDC statement addresses people of all ages. The AAP and the CDC work together to try to harmonize the recommendations every year.

The AAP recommends annual seasonal influenza immunization for *all* people 6 months and older, including all children and adolescents. Some children will need 2 doses of seasonal influenza vaccine. Refer to the AAP policy and algorithm below for more details.

Vaccination should begin as soon as flu vaccine is available. A Vaccine Information Statement (VIS) must be offered with every dose of vaccine administered.

- **AAP:** [The American Academy of Pediatrics Recommendations for Prevention and Control of Influenza in Children, 2017-18](#)
- **CDC:** [Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2017–18 Influenza Season](#)

Additional recommendations from the AAP for the clinical manifestations, etiology, epidemiology, diagnostics, treatment, and control measures of influenza can also be found in the **Red Book 2015 Report of the Committee on Infectious Diseases** (pages 476 - 493) and on [Red Book Online](#) (login required).

Tools and Resources

- [Red Book Online Influenza Resource Page](#)
- [Flu Vaccine Recommendations Speaking Points](#)
(Login required)
- [CDC Fact Sheet on Influenza Vaccination During Pregnancy](#)



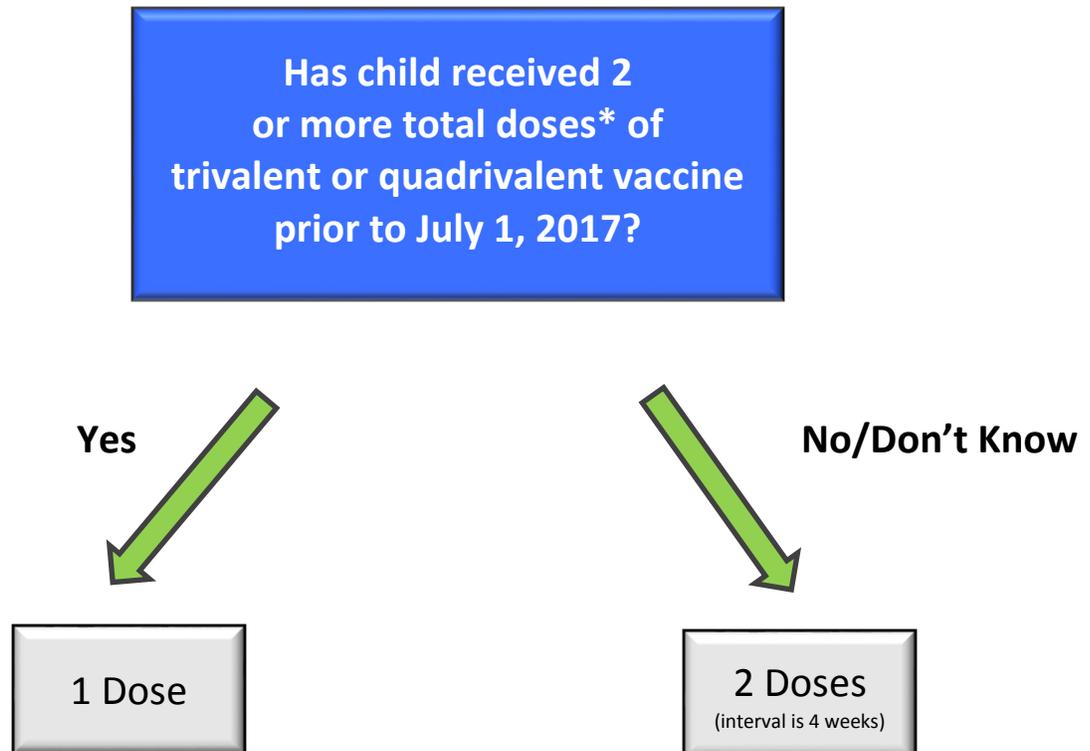
Flu News

- AAP News [New flu guidance reiterates importance of vaccine for everyone older than 6 months](#)
- [Flu Vaccine Recommendations Speaking Points](#) (Login required)
- CDC: [Flu Activity and Surveillance](#)

Algorithm

This algorithm describes the number of 2017-18 seasonal influenza doses for children 6 months through 8 years of age. *The two doses need not have been received during the same season or consecutive seasons.

Number of Seasonal Influenza Doses for Children 6 Months through 8 Years of Age



- The number of seasonal influenza vaccine doses to be administered in the 2017-18 influenza season depends on the child's age at the time of the first administered dose and his or her vaccine history (Figure above):
- Children 9 years and older need only 1 dose.
- Children 6 months through 8 years of age:
 - Need 2 doses if they have received fewer than 2 doses of any trivalent or quadrivalent influenza vaccine (IIV or LAIV) prior to July 1, 2017. The interval between the 2 doses should be at least 4 weeks.
 - Require only 1 dose if they have previously received 2 or more total doses of any trivalent or quadrivalent influenza vaccine (IIV or LAIV) prior to July 1, 2017. The 2 previous doses do not need to have been received during the same influenza season or consecutive influenza seasons. Despite recent evidence for poor effectiveness of LAIV4, receipt of LAIV4 in the past is still expected to have primed a child's immune system. There currently are no data that suggest otherwise. Therefore, children who received 2 or more doses of LAIV4 prior to July 1, 2017 may receive only 1 dose of IIV for the 2017-2018 season.

- Vaccination should not be delayed to obtain a specific product for either dose. Any available, age-appropriate trivalent or quadrivalent *inactivated* vaccine can be used. A child who receives only 1 of the 2 doses as a quadrivalent formulation is likely to be less primed against the additional B virus.
- **DO NOT** administer influenza vaccine to children younger than **6 months of age**. Because the vaccine is not licensed for children under 6 months of age, other methods of protecting this population can be used. For example, pregnant women are recommended to receive the vaccine. In addition to protecting the mother, flu vaccine also protects the infant through antibodies transfer. “Cocooning” is another strategy used—family members and close contacts who receive the vaccine are less likely to pass disease to the infant, creating a protective “cocoon” around them.

Please see the AAP [Recommendations for Prevention and Control of Influenza in Children, 2017-18](#) for more information.

Office-based Practices

Supply

As was the case last year, both trivalent (protects against 3 strains—2 type A and 1 type B) and quadrivalent (protects against four strains—2 type A and 2 type B) will continue to be available. Neither vaccine formulation is preferred over the other. Anticipated supply for the influenza season is available from manufacturer presentations at the [Influenza Summit](#) (Session 10). View the presentations from each manufacturer to find out what types of vaccine and how much is projected to be available this season.

Tools and Resources

- [Influenza Vaccine Availability Tracking System \(IVATS\)](#)
Each year, the Immunization Action Coalition's Influenza Summit hosts IVATS, which serves to connect providers seeking influenza vaccine to distributors and manufacturers (those who sell direct to customers) who have influenza vaccine.
- [Vaccine Products and Ordering](#)
The Influenza Summit has provided information on how vaccine can be ordered and from whom.
- Manufacturers
 - [Sanofi Pasteur](#)
 - [GlaxoSmithKline](#)
 - [Seqirus](#)

Storage and Handling

It is important to store vaccine properly according to the manufacturer's and the CDC's guidance. Many pediatricians and their staff are unaware that temperature excursions have the potential to destroy potency of vaccine stock (especially if vaccines get too cold). If such vaccines are given to children, the children will not be protected against disease. Sufficient storage space is needed for the vaccines.

Some practices may want to consider a flu vaccine fridge, a separate fridge to use just during flu season. If a vaccine refrigerator is packed too tightly, temperature fluctuations can occur and make the flu vaccine and your other vaccine stock unusable.

Influenza Vaccine Storage Basics

- IIV should be stored between 2°C and 8°C (36°F and 46°F) and should not be frozen. IIV that has been frozen should be discarded.

Vaccine Storage and Handling Guidance

The CDC Vaccine Storage and Handling Toolkit was updated June 2016. It includes CDC Recommendations for the storage and handling of vaccine. Some important recommendations include:

- Use of a detachable probe in a thermal-buffered material (eg, glycol, glass beads), rather than measuring ambient air temperatures;
- Use of digital data loggers with detachable probes that record and store temperature information at frequent programmable intervals for 24-hour temperature monitoring rather than non-continuous temperature monitoring;
- Use of purpose-built (eg, biological, pharmaceutical, medical-grade) storage units or stand-alone refrigerator and stand-alone freezer units suitable for vaccine storage rather than combination (refrigerator + freezer) or other units not designed for storing fragile biologics, such as vaccines;
- Discontinuing use of dorm-style or bar-style refrigerator/freezers for ANY vaccine storage, even temporary storage; and
- Weekly review of vaccine expiration dates and rotation of vaccine stock.

Tools and Resources

- [AAP Storage and Handling Web page](#)
- [AAP Immunization Training Guide](#)
- [CDC Vaccine Storage and Handling eLearn](#)
- [CDC Storage and Handling Toolkit](#)
- [Immunization Action Coalition temperature logs, checklists, and tip sheets](#)

Scheduling

While influenza starts circulating sometime between September and February, flu vaccine preparation begins much earlier. Preparing for the added work of flu vaccine scheduling is an important first step. Vaccine is often available as early as late July and early August. Therefore, preparing your patient lists and schedules beginning in June will help you organize your office and educate your staff prior to the onslaught of vaccine-only visits.

The AAP recommends all people 6 months and older be vaccinated against seasonal flu. In addition, physicians should make extra efforts to immunize all patients with special healthcare needs. Be strategic in meeting the needs of children and youth with special healthcare needs. Children with chronic medical conditions, such as asthma, diabetes mellitus, hemodynamically significant cardiac disease, immunosuppression, or neurologic and neurodevelopmental disorders, are at high risk for influenza-related complications. Pediatricians, medical subspecialists, and parents can work together to make sure these children receive the seasonal influenza vaccine as soon as it is available and that there is a plan in place to treat them early if they develop influenza-like illness.

A medical subspecialist might see a child more often than the primary-care provider. If so, the specialist can add a note to reports that are sent to the child's primary care provider: "In addition, because of his/her neurologic (or other) condition, Name is at high risk for severe complications from the flu and therefore it is extremely important that he/she receive a yearly flu shot."

Scheduling this many patients can be a daunting task for many physicians' offices, especially as it usually coincides with the beginning of the school year and an increase in sick-child visits. Below are some tips to get your practice through the season:

- **Begin advertising flu vaccine as soon as it is available.** When you are ready to start administering flu vaccine, you can make your patients aware by posting signs in the waiting areas and exam rooms, sending out flyers via email/text (must have email/text waiver signed by parent/patient), and posting updates on the practice's Web and social media sites.
- **Prepare early. Set up a separate nurse-only or flu-shot schedule as soon as you decide when to start administering flu vaccine.** These appointments should be shorter in length and set up for when you either have extra staff or on traditionally slower days. Schedule plenty of days for after-school appointments. Having this schedule separate allows you to have sufficient staff and to keep track of vaccine supply. Using a separate appointment type such as "flu-shot", allows you to continually track how many patients still need appointments. Also, it is much easier for the patients and families, when they can get immunized quickly and efficiently.
- **Consider setting up after hours or Saturday flu shot clinic days.** This can allow a practice to vaccinate a much larger group of patients more efficiently and prior to the start of influenza virus circulation. [Read about a successful flu clinic.](#)
- **Contact your EHR or Practice Management vendor to start identifying children who need to be called into the office ("recall") for influenza vaccine.**
 - **Find out the steps needed to run reports based on diagnosis.** Run your reports for all children in your practice with any asthma diagnosis, diabetes diagnosis, and other chronic conditions or illnesses for the past 2 years. As soon as you receive your flu vaccine inventory for the season, those children should be scheduled as soon as possible, even if they have an upcoming well-child visit within the next few months; these are the children who need to be vaccinated as early as possible as they are at higher risk for complications due to influenza infection.
 - **Run a separate report of all active patients.** Exclude those scheduled for well-child exams in the months of August, September, and October. Those patients scheduled for well-child exams should receive their flu vaccine during that visit. Excluding these groups from the report will help lighten the recall process.
- **Consider a service that can set up a "phone (call or text) blast" or "email blast."** The blast can simply advise your healthy patients without well-child exams in August, September, and October, that the flu vaccine is in stock and they should call at their earliest convenience to schedule their child's flu vaccine.

- **Advise staff as soon as vaccine arrives and review appointment procedures.** Advise your physicians, nurses, front office staff, and anyone who will have contact with patients that flu vaccine is in stock and to either offer vaccine to those in the office or schedule appointments for those who call. Physicians should offer the vaccine to all patients at any visit (not just well visits). If the patient does not have true contraindication, he or she should receive the flu vaccine (whatever age-appropriate vaccine is in stock) when in the office.
- **Offer vaccine to siblings.** Physicians and nurses should offer vaccine to siblings who are patients who may be in the office, whether they are scheduled for an appointment or not. “Never miss an opportunity” to vaccinate should always be the office mantra, but especially once the flu vaccine has been delivered.
- **Follow up with children who need 2 doses and those who haven’t scheduled an appointment.** At the end of each month starting when your first shipment of vaccine is received, run a follow-up scheduling report of all active patients; exclude from this report all those scheduled for well-child exams through October and all those already scheduled for a flu-shot appointment. These remaining patients may require extra outreach to come in for their vaccine. A follow up call/text/ mailing/email, whatever is reasonable for your office, is likely necessary.
- **Continue to vaccinate throughout the season (through June 30th).** Influenza is unpredictable, may have multiple peaks, and can occur any time.

Scheduling Plan

Consider options available for scheduling and create a plan for the season. Some ways to schedule include:

- Schedule patients for flu vaccine early or late (eg, if practice is open 8-5, schedule between 7 and 8am or between 5 and 6pm).
- Schedule patients for flu vaccine anytime the office is open, but assign a maximum number of appointments per day or half day, otherwise office staff could have more patients than they are able to manage.
- Train those who answer the office phones to tell patients/parents who call (whether to ask a question or to schedule any type of appointment), that flu vaccines are available and offer to schedule an appointment for siblings to be vaccinated, as well.
- Schedule children who need a second dose at the time they get their first dose. Offer a reminder card with the appointment on it before they leave the office.
- Have flu clinics on Saturdays—this is helpful for children who need a second dose of flu vaccine.
 - Saturday clinics eliminate crowding in the office once the high-volume fall season starts. It also keeps “well” kids from sitting in the waiting room with “sick” kids (if you don’t have regularly scheduled office hours).
 - Designate a “flu clinic organizer” to do the prep work needed to make your flu clinic run smoothly. Here are some suggested duties:
 - Prepare a sign-up list for staff to work during each flu clinic and explain the need for staff to sign up
 - Post signs in the office announcing flu vaccine availability. Use an email service such as Mad Mimi and post a notice on the office’s Web site
 - Schedule preparation: prepare a document with columns of different kinds of appointments—one column for patients 6-35 months, one for patients who are 3+, 4+, or 5+ years depending on the brand used, etc.
 - Make sure that there is adequate vaccine supply to correlate with the number of patients scheduled in each of the columns, for both Vaccines for Children (VFC) vaccine and private stock
 - Assign staff to perform the following roles:
 - Check patients in
 - Escort patients to room
 - Obtain consent/signature and answer questions
 - Assign one staff person to administer vaccine to patients in each “column” of scheduled patients, (eg, one staff member to the 3 or 4 yrs+ column)

- Paper preparation: gather and copy consent forms, VISs, second dose cards, etc.
- Check insurance coverage
- Place reminder calls to scheduled patients
- Staff preparation: make sure staff (especially new staff) are adequately trained to work the clinic—all staff working the clinic should be appropriately (re)trained the week of the clinic
- Vaccine-vial lot preparation: If you have a separate fridge, pull certain lots to the front—some lots expire sooner than others
- Building preparation: open the office and exam rooms, turn on computers, etc.
- Manage patient flow in the clinic
- Make sure personnel (staff) documents the vaccines they administered at the time they are given or no later than before the end of the day
- Document any vaccine errors incurred on the day of and reporting to office manager on the following Monday (eg, VFC vs private, wrong dose administered, expired lot used, etc.)
- Close up the office: shut down exam rooms, turn off computers, check fridge temps and make sure fridge doors are closed, lock up the office, etc.

Tools and Resources

- [AAP Vaccine Preventable Diseases and Policy Page](#) (see influenza)
- [Centers for Disease Control Flu page](#)
- Your EHR and/or practice management support team

Prebooking for Next Year

Each year, prebooking of influenza vaccine (ordering doses for the next year's flu season) begins around February, before the current season is even over. There are several things to consider when prebooking to help determine the number of doses needed for the next season. It is helpful if you have an electronic health record (EHR) or use an immunization information system (IIS), as most EHRs and IISs can categorize the number of patients by date of birth, which is important when calculating who will need 2 doses of vaccine. Some considerations for ordering include:

- Number of children in each age group. Age groupings will be determined by the brand of vaccine used.
 - If you use certain Sanofi Pasteur vaccines
 - how many children will be 6-35 months of age at the start of the season?
 - how many children will be 3+ years at the start of the season?
 - If you use certain GlaxoSmithKline vaccines
 - how many children will be 3+ years by the start of the season?
 - If you use the certain Seqirus vaccines
 - how many children will be 4+ years by the start of the season?
 - how many children will be 5+ years by the start of the season?
 - Will you order multi-dose vials or use single-dose vaccines/prefilled syringes?
- Approximate number of children who will need 2 doses. This is important to factor into your prebooking because you really want everyone who needs 2 doses to receive both so they are fully protected. Individuals who need 2 doses will not be fully protected until they receive the second dose.
- Approximate number of new patients each year. For example, if you have a 3% increase in patients each year, you will want to increase your prebooking order as well. For pediatricians, new patients should also include the number of expected newborns who will be 6 months of age by flu season. It's important to remember to plan for babies not yet born and also recognize that these infants will need a second dose.
- Storage. Sufficient storage space is needed for the vaccines. Some practices may want to consider a flu vaccine fridge, a separate fridge to use just during flu season. If a vaccine refrigerator is packed too tightly, temperature fluctuations can occur and make the flu vaccine and your other vaccine stock unusable.

Make sure you have enough needles/syringes on hand. If you use prefilled syringes, you won't need to purchase additional syringes. If you use multi-dose vials, you will need to purchase additional syringes.

Tools and Resources

- [Vaccine Products and Ordering](#)
The Influenza Summit has provided information on how vaccine can be ordered and from whom.
- Manufacturers
 - [Sanofi Pasteur](#)
 - [GlaxoSmithKline](#)
 - [Seqirus](#)

Liability and Risk Management

Influenza vaccines (IIV) are covered by the Vaccine Injury Compensation Program (VICP). Pediatricians and their clinic staff should follow the good risk communication and documentation steps for IIV vaccine which includes providing parents with the appropriate VIS before the vaccine is administered. The most recent version of the VIS is dated August 7, 2015. The VICP requires vaccine administrators to use the latest editions. Registering to receive VIS email updates notifications from the CDC the day the new editions are posted is a good strategy to keep current.

An easy way to remember them is to follow the 5 **D**'s.

Double check to make sure the correct VIS is being used. The [current VIS can be downloaded here](#).

Distribute the VIS with each dose of the vaccine before the vaccine is given. It is the law. There are many acceptable ways to provide patients and parents with VISs. [These are detailed on the CDC website](#).

Discuss the risks and benefits of the vaccine as well as the risks of not being immunized. VISs are intended to supplement, not replace risk communication discussions.

Document in each patient's permanent medical record:

- 1) that the VIS was provided at the time of vaccination;
- 2) the edition date of each VIS;
- 3) the name, address, and title of the individual administering the vaccine;
- 4) the date of vaccine administration; and
- 5) the vaccine manufacturer and lot number of the vaccine used.

Dialogue with those who have questions or express hesitancy about vaccination. When parents refuse immunization, it is important to try to understand their reasoning and respond nonjudgmentally with facts about the safety and effectiveness of vaccines. If they still decline the recommended vaccine, it is prudent to have parents sign an *informed refusal* document. Here is the link to the [AAP refusal form](#).

If you vaccinate parents, grandparents or other adults: Some pediatricians find it helpful to offer flu shots to parents or other adults that accompany patients to the pediatric office. Many parents appreciate the convenience. While applicable vaccine injuries are covered by the VICP, it is important to consider other malpractice risks and follow important risk management strategies.

Contact your medical liability insurance company. Some insurer policies do not cover pediatricians for treating adults. Verify coverage before you decide to offer this service.

Physicians administering vaccines to adults may be exposed to other malpractice risks. Because pediatricians do not care for adults ordinarily, they may not be able to assess contraindications. Their offices may not be equipped to deal with adverse reactions. Be sure to screen adults for contraindications and document that screening.

When a physician, or nurse under the supervision of a physician, administers a vaccination to an adult, a court is likely to determine that providing such services created a physician-patient relationship. This relationship creates malpractice exposure for the physician for failure to diagnose or treat other illnesses as well as injuries or problems unrelated to the administration of the vaccine.

As with any other patient, medical records for the vaccinated adult must be created and retained in the pediatric office. Since the VICP liability protections for vaccine-related injuries apply to immunized adults, so do the requirements for record-keeping and distributing VIS. This includes documenting risk communication and informed consent, as well as the following: the vaccine manufacturer, lot number and date of administration, the name and business address of the provider administering the vaccine, the VIS version date and date it was provided, the vaccination site, route of administration, and expiration date of the vaccine.



Tools and Resources

- [AAP Refusal to Vaccinate Form](#)
- [Vaccine Information Statements](#)
The latest influenza VIS has been posted and are dated August 7, 2015. These sheets are required by federal law to be provided each time a vaccine is administered.
- [What's New with VISs](#)
- [Screening Checklist for Adults](#)
- [AAP Technical Report on Immunizing Parents and Other Close Family Contacts in the Pediatric Office Setting](#)

Patient Education and Vaccine Hesitancy

Patient education is an important part of vaccine delivery. Despite vaccinations having an excellent safety record and being tremendously successful at preventing serious diseases, some parents still have questions and even concerns. Pediatricians can let parents and patients know that while flu vaccine is not 100% effective, we do know that those who get flu after having been vaccinated are less likely to get really sick, be hospitalized, or have serious complications.

Articles for parents about influenza are available on AAP's parenting Web site, HealthyChildren.org. In addition, a revised patient handout will be posted to Pediatric Patient Education (PPE) — AAP's online subscription resource for healthcare professionals.

From AAP:

- [PPE handout: Seasonal Influenza \(Flu\)](#) (Accessible to PPE and Pediatric Care Online subscribers)
- [Flu Vaccine Recommendations Speaking Points](#) (Login required)

From CDC

- [Vaccine Information Statements](#)
These sheets are required to be provided whenever a dose of vaccine is administered. See the CDC Web site for the most recent VIS.
- [Flu Information for Parents with Young Children](#)

Vaccine Hesitancy

So why do parents not vaccinate their kids? It sounds so simple, a vaccine to prevent the flu. Some of the reasons parents/guardians give are below, with possible responses:

- My kids have never had the flu.
 - I'm glad to hear that and I hope they don't get it this year, but avoiding the flu in the past is not a predictor of who will get the flu in the future. Getting vaccinated is the single most important thing you can do to prevent the flu. The flu kills up to 49,000 people each year and makes many more sick. Many of these deaths occur in healthy individuals. Even one unnecessary death is too many.
- I got the flu shot once and it gave me the flu, or the year I got the flu shot was the sickest I've ever been.
 - The strains of flu that are put into the flu shot are "killed" viruses. The flu shot does not and cannot cause the flu.
 - If someone gets a flu shot in the middle of flu season, they may already have been exposed to the flu and be coming down with it or another virus (colds are very common during flu season and can vary in severity). Because the shot and getting sick happened at the same time, they think the flu shot gave them the flu.
 - It also takes about 2 weeks for the body to build protection after the shot, so some people get sick just before or during that time period and blame the shot.
 - The most common side effects of a flu vaccine are soreness at the injection site and sometimes a low-grade fever. Sometimes people who experience side effects seem to think "they got the flu."

- It doesn't work; my kid got a flu shot and still got the flu.
 - While the flu vaccine is not 100% effective, we do know that those who are vaccinated and who later get a flu virus are less likely to get really sick, be hospitalized, or have serious complications.
 - There are hundreds of strains of the flu and there are only 3 or 4 strains of flu in the flu vaccine. Each year scientists determine the 3 or 4 most common strains of flu virus circulating and that's what's included in the upcoming year's flu vaccine. There is always the possibility that the child could get a different strain of flu than one that's included in the vaccine; however, if that happens, the duration and severity of symptoms is generally much less.
- The flu is not really that bad, no worse than a bad cold.
 - Although it is sometimes challenging to tell the difference between a cold and the flu, the flu can have serious implications and even lead to death, especially for the very young, very sick, or very old. It tends to last for several days, keeping you out of work and your child out of school. Getting vaccinated not only protects you, but those closest to you as well.
- Thimerosal—is it safe? Does it cause autism?
 - Thimerosal is a preservative that is included in multi-dose vials. It keeps the vaccine sterile. Studies have proven that thimerosal is not linked to autism. Before the studies were done, manufacturers took thimerosal out of many shots, so there are preservative-free shots available.

Tools and Resources

- [AAP Communicating with Families pages](#)
- AAP Clinical Report: [Countering Vaccine Hesitancy](#)
- AAP Free Online Course, [Challenging Cases: Countering Vaccine Hesitancy](#)
- AAP [Free Online Course](#) on Influenza Prevention and Control Strategies in Childcare (Coming this Fall!)
- [Medical Versus Nonmedical Immunization Exemptions for Child Care and School Attendance](#)
- [Vaccine Delays, Refusals, and Patient Dismissals: A Survey of Pediatricians](#)
- [AAP Risk Communication Videos](#)
- [Misconceptions about Seasonal Flu and Flu Vaccines](#)
- [Flu Vaccine for Preteens and Teens](#)
- [Thimerosal in Flu Vaccine](#)
- [Ask the Experts: Influenza](#)
- [Don't Take Chances with Your Family's Health – Make Sure You All Get Vaccinated Against Influenza Every Year!](#)

Administration

Registered nurses and medical assistants are the healthcare professionals most commonly administering immunizations. There are a few states that do not allow medical assistants to administer injections, so it is important to check state statutes. Many medical practices require that medical assistants be certified or registered and have graduated from an accredited medical assisting program to administer immunizations or any type of injections.

Administering immunizations correctly is a critical part of the healthcare professional's job. The flu vaccine is required to be administered either intramuscularly (IM), or intradermally (in the case of Fluzone intradermal). Following the most current influenza vaccine policy from the CDC is another important factor. It is important that healthcare professionals are knowledgeable and have been well-trained prior to administering immunizations. If immunizations are given improperly, the patient may not develop immunity.

Just prior to the delivery of flu vaccine to the office is a great time to freshen knowledge and skills on vaccine administration and safety. Remember the following:

- Review the VIS for the current flu vaccine season
- Review dosage recommendations, administration requirements and package inserts for the different flu vaccines
- Review IM placement locations
 - On the thigh (vastus lateralis is the preferred muscle)—the preferred spot for infants and young children
 - Arm (Deltoid muscle)—older children and adults
- Choose the right needle size
 - Usual choices in the pediatric setting are 5/8", 1", and 1 & 1/2"; ensure the needle length is sufficient to administer vaccine in the muscle mass, that's the goal. You don't want to merely hit deep into subcutaneous (SQ) tissue.
 - For infants up to age 1 year, a 1" needle is usually used in the vastus lateralis muscle of the upper thigh. Examine the 6-month child well; sometimes a 5/8" needle may be appropriate. The appropriate needle length, especially in infants, is very much patient dependent.
 - For toddlers and older children, needle length will vary based on injection site (vastus lateralis or deltoid) and weight of the patient (1" – 1.5").
- **For Injectable Flu vaccine**
 - Insert the needle at a 90 degree angle quickly. Do not aspirate after needle insertion.
 - Remember multiple immunizations given on the same day should be given a minimum of 1" apart.
- **For Intradermal Flu Vaccine** ([see administration guide](#))
 - Fluzone Intradermal vaccine is given in the upper arm—the same spot you would administer an IM vaccine
 - First shake the vial
 - Insert the needle perpendicular to the skin above the deltoid
 - Push the plunger to inject (do not aspirate)
 - Then remove the needle and dispose
- Review Infection Control & Quality Control
 - Remind staff to wash hands between each patient and prior to vaccine preparation. Hand washing is the most important way to prevent the spread of infection. This is especially important during a busy flu-shot clinic when harried staff may be likely to forget.
 - Gloves should be worn if there is a likelihood that the person administering the vaccine might come into contact with body fluids or the person has open sores or cuts on the hands.
 - Always check expiration dates before drawing up the vaccine.
 - Document the vaccine administered in the patients chart accurately. See the Liability and Risk Management section of this document for details.
 - Give each patient the appropriate VIS for the current flu vaccine season before the vaccine is administered.



Tools and Resources

- [AAP Immunization Training Guide](#)
- [Administering Vaccines: Dose, Route, Site, and Needle Size](#)
- [How to Administer IM and SC Vaccine Injections to Adults](#)
- [How to Administer Intramuscular \(IM\) Vaccine Injections and How to Administer Subcutaneous \(SQ\) Vaccine Injections](#)
- [Fluzone Intradermal Administration Guide](#)

Payment and Coding

Each practice should verify with third-party payers whether the influenza vaccine is a covered benefit and how it will be paid. Third-party payers include commercial insurers, Medicaid fee for service, and Medicaid managed care. Although the Affordable Care Act (ACA) allows for those enrolled in group or individual private health plans to be eligible to receive vaccines without any cost-sharing requirements when provided by an in-network provider, some plans such as grandfathered plans may be exempt from the ACA requirement. Generally, for those payers in which vaccines are a covered benefit, most third party payers will base coverage for Food and Drug Administration (FDA)-approved vaccines that are published recommendations by the ACIP, AAP, and/or the American Academy of Family Physicians. Until recommendations are published, those health plan claims systems do not recognize the vaccine as a covered benefit.

1. Review each contract with third-party payers to make sure it includes a clause allowing mid-contract inclusion of new immunization recommendations. If there are no contract provisions on adding new immunization recommendations, you will need to verify with the carriers how they will incorporate new recommendations into the benefits coverage and fee schedule so as not to delay payment.
2. Review contracts regarding payment levels for vaccines. Make sure there is a provision in the fee schedule that allows for payment to be in an amount equal to the **sum** of both the cost of the vaccine and related practice expenses to store the vaccine(s). The AAP supports use of the [CDC Vaccine Private Sector price list](#) as the basis for the vaccine cost as this lists the manufacturer's current vaccine price. Some carriers will base health-plan payment at a level of average wholesale price (AWP) or average sales price (ASP), and it is important to identify the source of the AWP or ASP, as there are several vendors providing these figures as well as verify that the current AWP or ASP is being referenced. Unlike sources of AWP, the CDC private payer vaccine price list is not proprietary and is a more readily transparent source of actual vaccine acquisition costs. It is based on the manufacturer's price for vaccines and is updated as soon as prices changes are reported as opposed to ASP and AWP, which are updated quarterly.
3. Include a provision in the contract for the health plan to pay no less than the vaccine acquisition cost plus related practice-expense costs. For information on the total costs related to the vaccine product, see the [AAP Business Case for Pricing Vaccines](#). (Member benefit, log-in required). Sample contract language on vaccines is available in the [AAP Vaccine Addendum to Payer Contracts](#). (Member benefit, log-in required).
4. In addition to the payment for the vaccine and related expenses, make sure the contract provides payment for the immunization administration, which is a separate expense. For information on the total expenses for immunization administration, see the [AAP Business Case for Pricing Vaccine Administration](#). (Member benefit, log-in required).
5. Check with your state regarding inclusion of specific influenza vaccines in the VFC program. The VFC program provides the vaccine product at no cost to the practice. Practices may charge an administration fee. VFC is not an option for those children covered by private health insurance providing immunization benefits. This program is for children aged birth through 18 years who:
 - Are eligible for Medicaid
 - Have no health insurance
 - Are Native American or Alaska Native, or
 - Have health insurance, but it does not cover immunizations AND they go to a Federally Qualified Health Center
6. AAP chapters may wish to follow up with Medicaid and the state Children's Health Insurance Program, to ensure coverage of the vaccine, practice-related expenses and its administration. Children eligible for Medicaid should receive the vaccine through the VFC program. The AAP has developed The [Business Case for Pricing Immunization Administration in a Federal or State Supplied Environment](#) to inform payers and practices of the practice expenses that need to be covered and paid when vaccines are provided to the practice.

- Develop payment arrangements with families if coverage is not available through a third-party payer. Consider having families sign waivers or advance beneficiary notices specifying their financial responsibility for services not covered by their health plan. Additional information on waivers can be found on My AAP, private payer advocacy page under [Waivers: The Basics for a Pediatric Office](#). (Member benefit, login required).

Reporting for the 2017-18 seasonal influenza vaccine products will be similar to last year. Trivalent and quadrivalent vaccines have received FDA approval and corresponding *Current Procedural Terminology* (CPT®) codes have been added to the list. Note that the intranasal influenza vaccine is not being recommended by ACIP, therefore most, if not all payers, will not cover. It is important to remember when coding for the influenza vaccine that the following information is relayed to the coder or biller:

- Quadrivalent or trivalent vaccine administered
- Preservative or preservative-free vaccine
- Dose (all codes were revised for dosing not age)
- Other types of vaccines such as cell cultured or antibiotic free

This information will guide them in order to report the most appropriate code.

CPT Code	CPT Descriptor	Manufacturer	Brand	Age Recommendation
Quadrivalent (Quad)				
90630	Influenza, quadrivalent, split virus, preservative free, intradermal	Sanofi Pasteur	Fluzone Intradermal Quad	≥18 years
90674	Influenza virus vaccine, quadrivalent (ccIV4), derived from cell cultures, subunit, preservative and antibiotic free, 0.5 mL dosage, IM	Seqirus	Flucelvax	≥4 years
90685	Influenza virus vaccine, quadrivalent, split virus, preservative free, 0.25 mL dosage, IM	sanofi pasteur	Fluzone Quad	6-35 months
90686	Influenza virus vaccine, quadrivalent, split virus, preservative free, 0.5 mL dosage, IM	Seqirus GlaxoSmithKline GlaxoSmithKline sanofi pasteur	Afluria Fluarix Quad FluLaval Quad Fluzone Quad	≥18 years ≥36 months ≥36 months ≥6 months
90687	Influenza virus vaccine, quadrivalent, split virus, 0.25 mL dosage, IM	sanofi pasteur	Fluzone Quad	6-35 months
90688	Influenza virus vaccine, quadrivalent, split virus, 0.5 mL dosage, IM	Seqirus sanofi pasteur GlaxoSmithKline	Afluria Fluzone Quad FLULAVAL	≥18 years ≥36 months ≥6 months
90682	Influenza virus vaccine, quadrivalent (RIV4), derived from recombinant DNA, hemagglutinin (HA) protein only, preservative and antibiotic free, IM	Protein Sciences	Flublok	≥18 years
90756*	Influenza virus vaccine, quadrivalent (ccIV4), derived from cell cultures, subunit, antibiotic free, .5 mL dosage, IM	Seqirus	Flucelvax Quad*	≥4 years

Trivalent				
90656*	Influenza virus vaccine, trivalent, split virus, preservative free, 0.5 mL dosage, IM	Seqirus Seqirus	Afluria Fluvirin	≥5 years ≥4 years
90658	Influenza virus vaccine, trivalent, split virus, 0.5 mL dosage, IM	Seqirus Seqirus	Afluria Fluvirin	≥5 years ≥4 years
90673	Influenza virus vaccine, trivalent (RIV3), derived from recombinant DNA, hemagglutinin (HA) protein only, preservative and antibiotic free, IM	Protein Sciences	Flublok	≥18 years

* Do not report **90656** prior to Jan 1 unless directed by your payers. Until Jan 1, report the unlisted vaccine code **90749** unless directed by your payer.

In addition to the influenza vaccine product code, be sure to also report the appropriate immunization administration code(s).

Report **90460** for a patient who

1. Is 18 years of age or younger AND
2. Receives vaccine counseling by the physician or other qualified healthcare professional (excluding clinical staff).

If both of the above criteria are not met, report the appropriate code from the **90471-90474** series. Report **90471** if the *influenza injection* is given. If, however, the influenza vaccine is given in conjunction with other vaccines, and the above criteria are not met to report a **90460** for the influenza vaccine administration, report **90472** for the *influenza injection*.

The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code for any vaccine given including influenza is **Z23** (encounter for immunizations).

Coding Vignette:

A 12-year old presents for her second HPV vaccine and her yearly influenza vaccine. She sees an RN who reviews contraindications and briefly counsels on the vaccines. Both are then administered.

Report **90471** (HPV) and **90472** (Influenza)

Note: Because the RN is not another qualified healthcare professional, you cannot report the **90460**.

Remember that the intranasal vaccine was not approved by ACIP this influenza season, therefore payers will most likely not cover it!



Tools and Resources

- [AAP Vaccine Financing page](#)
- [The Business Case for Pricing Vaccines](#) (Member log-in required)
- [Preparedness Checklist for Pediatric Practices](#) (Step 12: Handle Vaccine Issues)
- [Vaccine Coding Table](#)

Healthcare Worker Vaccination

The AAP recommends implementation of a mandatory influenza immunization policy for all healthcare personnel. Immunization of healthcare personnel is a critically important step to substantially reduce healthcare-associated influenza infections. Despite the efforts of many organizations to improve influenza immunization rates with the use of voluntary campaigns, influenza coverage among healthcare personnel remains unacceptably low. See the [AAP policy](#) and Implementation Guidance – [Influenza Immunization for All Health Care Personnel: Keep it Mandatory](#).

Supplying Vaccine

Pediatric practices that wish to implement a mandatory influenza vaccination policy for employees have several options:

- Provide the vaccine in the office and bill the employee's insurance,
- Ask the employee to go to their adult provider or other community immunizer to be vaccinated, or
- Purchase and administer the vaccine for all employees as part of office expenses.

Each option has benefits and drawbacks that should be considered.

- Providing the vaccine in the work setting at no cost to the employee has been shown to increase vaccination rates the most.
- Influenza vaccination may be a wise investment for practices, potentially reducing the amount of time off or sick pay for staff that may be incurred compared to the smaller cost of the vaccine.
- If the office provides the vaccine for employees, written documentation should be provided to the employee to return to their medical home. Offices should also consider entering each employee vaccination into the state registry if the registry includes adults.
- Payment from insurance companies may be difficult to obtain.

There are a variety of influenza vaccines available for different age groups. While most vaccines that are licensed for children are also licensed for older age groups, if supply is tight, practices may wish to order a different product for employees. Influenza vaccine availability [can be tracked online](#).

Employee Education

All employees who come into contact with patients, including front desk staff, need to be vaccinated. Some staff may need encouragement and education about the importance of influenza vaccination to protect patients. Information can be found at: <http://www.izsummitpartners.org/vaccinating-healthcare-personnel/> or <http://www.cdc.gov/flu/professionals/>.

Incentives

Some practices offer incentives to receive influenza vaccine, such as tying receipt of vaccine to holiday bonuses. Contests between sites or types of staff have been effective in some settings. Other practices have negative incentives, such as requiring those who are not vaccinated to wear a mask or be reassigned duties for flu season.

Tools and Resources

- AAP Policy Statement: [Influenza Immunization for All Health Care Personnel: Keep it Mandatory](#)
- [Implementation Guidance for Physicians on Mandatory Influenza Vaccination of Health Care Workers](#)

Community Partnerships

Schools, Head Start and other early education and child-care programs, community centers, after-school programs, camps, youth-sports organizations, and Mother's-Day-Out programs are all places to connect with to provide your community with information about influenza vaccine.

Consider starting to share information towards the end of the previous school year, in preparation for the next flu vaccine season. This will coincide with less stressful times at schools as well as in the office, as traditionally summer schedules are a little lighter.

At the end of the school year, obtain the school nurse contact information for your local schools. Reach out to him/her, inquire if you can add a flu vaccine flier to go into new student packets, hang in the school office, or be included in back-to-school newsletter. Assure the school and nurse you will not be advertising for your practice, just providing a general informational guide on the importance of receiving an annual flu vaccine, with instructions to contact the child's local physician.

Do the same for after-school programs, child-care centers, Mother's-Day-Out facilities, and camps or youth-sport associations, such as the YMCA. The task can be daunting, especially in larger cities, but it will be a summer project well worth the effort. Start by deciding on a mile-radius you will focus on and try to obtain as complete of a listing of community partners as you can. If you collect school and after-school care information on your patients at well visits, you should be able to run a report that can give you the schools used by the most patients in your office. The first time you create your list will be the toughest; subsequent years get easier.

Put in your order for VFC flu vaccines for the upcoming season. Have copies of VFC qualifying questionnaires ready for nurses and front office staff to be given out to patients.

Designate a "Flu Vaccine Expert" at your clinic. This should be a staff member who can be a contact person for the schools and community centers you have reached out to so they can have someone to call with questions on flu vaccine availability, shortages, dose recommendations, and so forth.

Serve as a resource for community vaccination programs. There is much to consider:

- If patients will be offered vaccine outside of the medical home, practices need to adjust orders accordingly.
- Follow up for a second dose, if needed, is also important. Communication between the primary care pediatrician and the school needs to occur to identify those who need a second dose and those who don't. Who is responsible for giving it?
- Will vaccines be stored appropriately in mobile locations?
- Have staff who vaccinate been appropriately trained? (eg, appropriate needle gauge and length)
- How will parents' consent to vaccination outside the medical home?
- Will the appropriate VIS be distributed and recommended documentation for vaccine administration be made?

Tools and Resources

- [Clinician Outreach and Communication Activity](#)



Diagnosis & Treatment

Even with excellent influenza vaccination practices, your office will still likely see children with the flu. It is important to properly diagnose and treat these patients. For information on the appropriate diagnosis and treatment, please view the [AAP Policy Statement: Recommendations for Prevention and Control of Influenza in Children, 2017-18](#) and the [AAP Red Book](#).

Tools and Resources

- [The American Academy of Pediatrics Recommendations for Prevention and Control of Influenza in Children, 2017-18](#)
- [AAP Red Book](#)