STEP 5:

Administering Vaccines

You have your vaccination supplies, and you have properly stored your vaccine inventory. As you start to assess your patients' vaccination status and history, the gaps in their records remind you why your practice is now incorporating vaccination services. It's time to administer vaccine.

Chances are, many of your patients are behind on their vaccinations and they are grateful that you are helping them get up to date. Even if you are new atadministering vaccines, don't be intimidated – this will soon be second nature to you.

Step-by-Step: Vaccine Administration Tasks

- Determine who can administer vaccines (either independently or under standing orders)
- Always provide a Vaccine Information Statement (VIS)
- Administer the vaccine properly
  - Use the proper site for injection
  - Prepare the vaccine (and diluent, if needed)
  - Use the proper needle gauge and length
  - Administer injections by the correct route – intramuscular (IM) or subcutaneous (Subcut)
  - Know how to deliver nasal spray vaccine (when recommended)
  - Administer all needed vaccines at the same visit
  - Safely dispose of the needle and syringe and nasal sprayer
  - Avoid vaccine administration errors
- Prepare and watch for an allergic reaction (anaphylaxis) after vaccination
  - Always report anaphylaxis and other adverse events after vaccination to VAERS
- Prepare and watch for syncope (fainting)
- Communicate about appointments for subsequent doses
- Understand proper spacing of doses

Determine who can administer vaccines (either independently or under standing orders)

Every state has regulations that specify who can administer vaccines. All states allow physicians, nurse practitioners, and physician assistants to both assess the need for and to administer vaccines. All states allow RNs and LPNs to administer vaccines. Most states allow medical assistants (MAs) to give injections after proper training and with supervision. All states allow pharmacists

You'll need to check to see if there are restrictions on the particular vaccine(s) they may administer in your state or if vaccines can be administered under standing orders

to assess the need for and administer one or more vaccines if they have been properly trained and certified. However, you'll need to check to see if there are restrictions on the particular vaccine(s) they may administer in your state or if vaccines can be administered under standing orders. For more

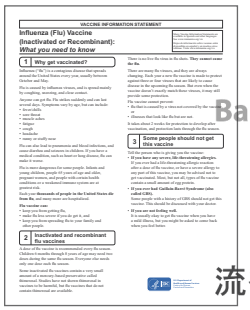
information about standing orders and who is eligible to provide vaccination services using them, which might include RNs, pharmacists, and MAs, see the Immunization Action Coalition's (IAC) *Using Standing Orders for Administering Vaccines: What You Should Know* at www.immunize.org/catg.d/p3066.pdf. You also should check with your state medical licensing board for the regulations in your practice location. Another great resource is IAC's *10 Steps to Implementing Standing Orders for Immunization in Your Practice Setting* available at www.immunize.org/catg.d/p3067.pdf.

Regardless of the local regulations, proper vaccine administration technique is a skill that requires practice. If you have not administered injectable or nasal spray vaccines recently, you should refresh your skills. In addition to watching a vaccine administration video (one example is discussed later in this chapter), you should consider contacting your local health department. Staff there may be able to provide hands-on training with this important procedure, or they can head you in the right direction for guidance.

Always provide a Vaccine Information Statement (VIS)

Since 1994, healthcare providers who administer any vaccine covered by the National Childhood Vaccine Injury Act (Section 2125 of the Public Health Service Act [42 U.S.C. §300aa-26]) are required to provide a copy of the relevant federal Vaccine Information Statement (VIS) *before* administering most vaccines to a person of any age, including adults. VISs are available for all vaccines licensed in the United States, and many are available in multiple languages on the IAC website at www.immunize.org/vis. A listing of the most current versions for each VIS also may be found on this website. Patients must be offered a copy (which can be an electronic copy) of the VIS to take home with them, though the recipient may decline. (You can learn more about this federal requirement in *Step 6 – Documentation and Related Issues*.) You probably will want to give patients even more information about the disease that the vaccine prevents, as well as answer any questions they may have.

VISs are available for all vaccines licensed in the United States, and many are available in multiple languages on the IAC website at www.immunize.org/vis.


VACCINE INFORMATION STATEMENT

Influenza (Flu) Vaccine (Inactivated or Recombinant): What you need to know

1 Why get vaccinated?

2 Inactivated and recombinant flu vaccines

3 Some people should not get this vaccine

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Вакцина против гриппа

İNAKTİF GRİP AŞISI

Vacuna contra la influenza

流行性感冒疫苗

Remember – if you don't administer the vaccine properly, you might as well not give it at all.

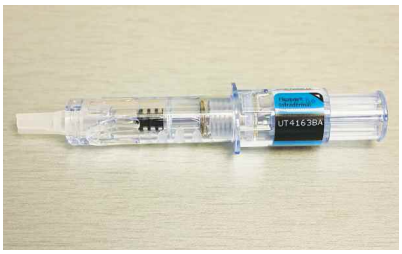
Administer the vaccine properly

Remember – if you don't administer the vaccine properly, you might as well not give it at all. You've gone to a lot of trouble to keep your vaccines "viable," and your patients need this protection. What a waste it would be for the vaccine not to be administered properly!

One common mistake is that too short a needle is used – a subcutaneous "Subcut" needle rather than an intramuscular "IM" needle. When this happens, the vaccine can be injected into fat instead of into muscle. You may hear that some vaccines will

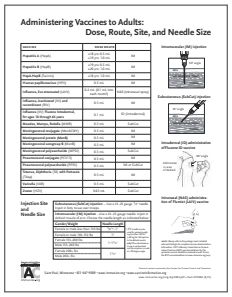
usually still work if given via the wrong route and will merely cause greater temporary local discomfort. While that may be true for some, for others, such as hepatitis B, HPV, influenza, and rabies vaccines, the correct route is essential to obtaining an adequate immune response.

We will not be discussing oral vaccines in the *Guide*. The only oral vaccine currently licensed for routine use in the U.S. is rotavirus, which is only administered to infants. In addition, one influenza vaccine (*Fluzone* Intradermal, Sanofi Pasteur) is specifically licensed for intradermal (into the skin) injection. This vaccine is administered with a specially designed microneedle and syringe into the deltoid area. If you stock this type of influenza vaccine (it currently is approved only for people 18 through 64 years of age), you should thoroughly acquaint yourself with how to use the injection system by reading the instructions in the product information. No other U.S. vaccine should ever be administered by the intradermal route. (Note that a tuberculin skin test, or PPD, which is administered intradermally, is a diagnostic test – NOT a vaccine.)

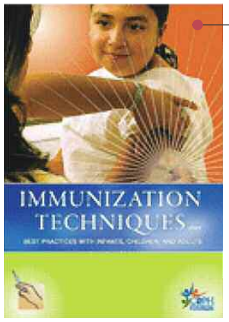


CDC

IAC's *Administering Vaccines to Adults: Dose, Route, Site, and Needle Size*, available at www.immunize.org/catg.d/p3084.pdf, provides a concise guide to help you ensure you are administering vaccines properly. In addition, after you read this chapter, watch the California Department of Public Health's DVD titled *Immunization Techniques: Best Practices with Infants, Children, and Adults*. The DVD is


Administering Vaccines to Adults:
Dose, Route, Site, and Needle Size

www.immunize.org/catg.d/p3084.pdf



www.immunize.org/dvd

available for a nominal charge at www.immunize.org/dvd, or the video may be streamed at www.youtube.com/watch?v=WsZ6NEijlfI. Unlike this *Guide*, which is limited to adult immunization issues, the video also covers infant and child injections. Watching this video will give you an idea of the differences, as well as the similarities, involved – and will remind you that it really is simpler to vaccinate adults.

Use the proper site for injection

For adult vaccinations, all you need to give an injection is the patient's deltoid muscle in the upper arm, although the muscle in the thigh can be used if necessary. (For infant vaccinations, the thigh is generally used as an injection site.) Except for the intradermal influenza vaccine mentioned above, vaccine injections are either intramuscular (IM) or subcutaneous (Subcut).

- **Intramuscular (IM)** – If you are giving an intramuscular injection, you will inject into the deltoid muscle below the shoulder on the upper arm, or into the thigh muscle.
- **Subcutaneous (Subcut)** – If you are giving a subcutaneous injection, you will inject into the fatty tissue (under the skin and overlying the muscle) on the back of the upper arm.

Additional information about these techniques is available later in this chapter.

Prepare the vaccine (and diluent, if needed)

Information about appropriate preparation for each vaccine is available in the package insert. (IAC maintains a web page which links to all package inserts at www.immunize.org/packageinserts.) However, the general steps involved in preparing different vaccine formulations are shown in the box on page 71.

Vaccine vials are labeled with the number of doses they contain. If you are using vaccine from a multi-dose vial, withdraw just the amount required for the dose into the syringe. Single-dose vials are widely used, and manufacturer pre-filled syringes also are available.

Most vaccines administered to adults in the U.S. are provided as a liquid, ready to inject. However, several adult vaccines (MMR, varicella, *Menveo* [MenACWY], *Bexsero* [MenB] and zoster) require reconstitution of powdered vaccine with a liquid diluent that is supplied by the manufacturer in a separate vial. The diluent is either saline or sterile water, except for the *Menveo* brand of MenACWY, in which the diluent contains three of the antigenic components of the vaccine. Do not substitute saline, sterile water, or any other liquid from your clinic's general supplies if you misplace a diluent! **Use only the diluent that was shipped to you with the vaccine you are preparing.**

Use only the diluent that was shipped to you with the vaccine you are preparing.

Any dose of vaccine reconstituted with the wrong diluent must be repeated. Additional information on diluents is available in *Vaccines with Diluents: How to Use Them*, found at www.immunize.org/catg.d/p3040.pdf.

Different vaccines should never be combined in a single syringe, except when specifically approved by the FDA and packaged for that specific purpose. Most combination vaccines (e.g., MMR or Tdap) will be combined by the manufacturer. Vaccine should *never* be transferred from one syringe to another, and partial doses from separate vials should not be combined into a single syringe. Both of these practices increase the risk of contamination.

Vaccine should *never* be transferred from one syringe to another.

If you are preparing more than one vaccine for a patient, be sure to label which syringe contains which vaccine. A simple way to label the vaccines is to use a silverware tray with permanently labeled separate "slots" for Tdap, influenza, hepatitis B, and other vaccine syringes. Or, keep on hand small sticky labels with vaccine names (these can be preprinted), and attach the appropriate vaccine label to the syringe containing that vaccine.

As discussed in *Step 3: Vaccine Storage and Handling*, you should not reconstitute or fill vaccine syringes in advance. Prepare and draw up vaccine only when you are ready to administer it.


CDC

Once you know if an injection will be given IM or Subcut, you can determine what length and gauge needle you need.

Use the proper needle gauge and length

It is critical for vaccine to be deposited into the proper tissue. An intramuscular injection usually requires a longer needle than a subcutaneous (Subcut) injection. Once you know if an injection will be given IM or Subcut, you can determine what length and gauge needle you need.

For almost all IM injections with most adults, you will need a 1"–1½", 22–25 gauge needle. If a patient is particularly large (i.e., women weighing 200 pounds or more, men weighing 260 pounds or more), you should use a 1½" needle. For Subcut injections, you will need a ⅝", 23–25 gauge needle for everyone.

Steps in Preparing Different Vaccine Formulations

(*adapted from the California Immunization Program's EZIZ resources*)

Before You Start Preparing ANY Type of Vaccine

- Wash your hands.
- Gather alcohol pads, the appropriate needle, and, as needed, a syringe.
- Get the vial or syringe of vaccine. (Always double check the vial label to make sure you have the vaccine you want to administer. Vaccine vials can look alike or have similar sounding names.)
- Check the vaccine against the clinician's written order or standing order.
- Check that today's date is sooner than the vaccine's expiration date.

Drawing Up LIQUID VACCINE

Single-dose Vial

- Remove plastic cap.
- Shake vial.
- Cleanse stopper with alcohol pad and let it dry.
- Assemble needle and syringe.
- Uncap needle.
- Hold vial steady on counter.
- Insert needle straight into center of vial stopper.
- Invert (turn upside-down) vial and pull needle back so the tip is in the liquid.
- Pull back on plunger and draw up entire contents of vial.
- Withdraw needle.
- Tap syringe and push out air.
- Recap the clean needle.

Pre-filled Syringe

- Shake syringe thoroughly.
- Remove syringe tip cover.
- Attach needle to syringe.

Preparing RECONSTITUTED VACCINE

Mixing the Vaccine

- Remove plastic caps.
- Cleanse stoppers with alcohol pad and let dry.*
- Assemble needle and syringe.
- Hold diluent vial steady on counter.
- Insert needle straight into center of vial stopper.
- Invert (turn upside-down) vial and pull needle back so the tip is in the liquid.
- Draw up all diluent into syringe and then withdraw needle.
- Hold vaccine vial steady on counter.
- Insert needle into center of stopper.
- Inject diluent.
- Holding vial and syringe together, shake to mix.

* *Be sure MMR, varicella, MMRV, and* Zostavax *vial stoppers are thoroughly dry. Alcohol may damage these live vaccines.*

Administer injections by the correct route – intramuscular (IM) or subcutaneous (Subcut)

There are several reasons for differentiating between IM and Subcut injections. Subcut doses are absorbed more slowly than IM doses. If you give an IM vaccine subcutaneously by mistake, the antibody "titers" (the level of antibodies in a blood sample) that result may be lower than they otherwise would be, and the injection also may be more painful. Some vaccines that contain an "adjuvant" (an ingredient that enhances the immune response to the antigens) must be given IM to avoid the local irritation, inflammation, or other reactions that can occur if they are administered subcutaneously. For our purposes, the important thing to remember is that the type of injection matters. It is not arbitrary.

Intramuscular (IM) injections

Intramuscular injections are administered into the deltoid muscle, which is a large triangular muscle that wraps over the shoulder into the upper arm. For vaccine injections, use the center part of the deltoid, usually about two finger-breadths below the acromion process (bony prominence above the deltoid) and above armpit-level in the upper arm.

Proper deltoid injection is critical in order not to hit the underlying bone, blood vessels, and nerves.

It seems like a large "target," but proper deltoid injection is critical in order not to hit the underlying bone, shoulder capsule, blood vessels, and nerves. If you have never given an IM injection or haven't given one for a long time, you should refresh your skills by watching a video and having hands-on, supervised practice before you attempt it.

Grasp the muscle between the thumb and fingers of your non-injecting hand. The needle should then be inserted perpendicular (that is, at a 90-degree angle) to the skin into the thickest part of the muscle. Insertion should be quick yet firm and steady.

CDC

IM in deltoid: 90-degree angle; 1" or longer needle

After the needle is inserted (to the hub of the needle), depress the plunger steadily, and then withdraw the needle quickly.

Vaccines that are given via intramuscular (IM) injection

- Hepatitis A
- Hepatitis B
- Human papillomavirus (HPV)
- Influenza, inactivated (exception: intradermal formulation)
- Meningococcal conjugate (Men ACWY)
- Meningococcal serogroup B (MenB)
- Pneumococcal conjugate (PCV)
- Pneumococcal polysaccharide (PPSV) (also can be given Subcut)
- Polio (also can be given Subcut)
- *Shingrix* (zoster, shingles)
- Tdap/Td

Subcutaneous (Subcut) injections

To administer a vaccine with a subcutaneous injection, you want to "pinch up" the subcutaneous (fatty) tissue on the back of the upper arm with your non-injecting hand and inject the needle at a 45-degree angle into the fat – a much narrower angle than that for an IM injection. Insert the needle all the way to the hub of the needle.

CDC

Subcut in outer arm: 45-degree angle; 5/8" needle

Vaccines that are given via subcutaneous (Subcut) injection

- MMR
- Pneumococcal polysaccharide (*also can be given IM*)
- Polio (*also can be given IM*)
- Varicella (chickenpox)
- *Zostavax* (zoster, shingles)

For both IM and Subcut injections, expose the entire area of the upper arm so that the sleeve does not obstruct the injection site. Wipe the injection area with an alcohol swab to clean away skin dirt (this prevents the needle from pushing skin dirt into the tissue), using an outward spiraling motion in a circle from the center to a two- or three-inch diameter.

Although you may wear gloves if you choose to, they are not required for giving injections.

Although you may wear gloves if you choose to, they are not required for giving injections. If you choose to wear gloves, they must be changed between every patient. Your hands should always be cleaned with soap and water or an alcohol-based waterless antiseptic before vaccine preparation, between patients, and any other time hands become soiled.

You should always have patients sit down for both IM and Subcut injections. Occasionally, a patient may feel faint at the sight of a needle or during an injection; if the patient is sitting instead of standing, this will lessen the chance of the patient falling.

Know how to deliver nasal spray vaccine (when recommended)*

Live attenuated influenza vaccine (LAIV – *FluMist*, MedImmune), licensed for adults through age 49 years, is given by the intranasal route using a special sprayer. Half of the vaccine is sprayed into each nostril. A plastic clip on the plunger divides the dose into two equal parts. The patient should be seated in an upright position. Instruct the patient to breathe normally. Gently place a hand behind the patient's head. The tip of the nasal sprayer should be inserted slightly into the nasal passage. Half of the contents of the sprayer (0.1 mL) is sprayed into the first nostril. The dose-divider clip is then removed and the procedure is repeated in the other nostril. The dose does not need to be repeated if the patient coughs or sneezes. Consult the package insert for additional information on the nasal administration of LAIV.

* **NOTE:** As of this writing, use of LAIV is not recommended by ACIP for the 2017–2018 influenza season. Follow ACIP guidance for each season's recommendations.

Administer all needed vaccines at the same visit

The *Recommended Adult Immunization Schedule*, found at www.cdc.gov/vaccines/schedules/downloads/adult/adult-combined-schedule.pdf, is complicated by a variety of factors. Most vaccines require more than one dose to create the proper immune response. Also, if you are giving different live attenuated vaccines, they either must be administered on the same day or be separately administered at least 4 weeks apart, in order to reduce immune response interference. For adults, the most

common combination of live vaccines would involve MMR, varicella, and/or LAIV, in which case you need to take extra care in "dose spacing." It's always best to give live vaccines at the same visit. If this is not possible for some reason, space them at least 4 weeks apart.

Simultaneous administration is encouraged because it is convenient and efficient for both patient and provider.

Administration of doses of multiple vaccines at a single visit does not result in decreased antibody responses or increased reactions. In fact, simultaneous administration is encouraged because it is convenient and efficient for both patient and provider.

www.eziz.org/assets/docs/IMM-718A.pdf

Consider using "site maps" to standardize specific vaccination locations (limb choice) on your patients. Use of a site map (such as the California Immunization Program's *Immunization Site Map* found at www.eziz.org/assets/docs/IMM-718A.pdf) can simplify the process of administering vaccines by reducing on-the-spot decision-making about which limb to use for a particular vaccine. It also can make identification of the cause of a localized reaction easier because you will know exactly where you injected each vaccine. A site map creates consistency within your clinic practice and assists you in documenting the site of administration along with the vaccine and dose in your patient's chart.

If you are giving two injections, the patient may prefer one in each arm. If you are giving three or more injections, you will need to give the patient at least two in the same arm. The distance between IM injection sites in the same extremity should be at least 1 inch apart, if possible. When administering Tdap or Td, you may want to give it in an arm by itself because it is known to cause more soreness and swelling than other vaccines. Two different Subcut injections can be given in opposite arms, unless the patient wants both in the same one. In that case, the Subcut injections also should be administered at least 1 inch from each other.

Safely dispose of the needle and syringe and nasal sprayer

After you have administered a vaccine by injection, remove the needle from the patient in a smooth motion at the same angle at which you inserted it.

CDC

Do *not* recap the needle after use. Immediately discard the used needle (still attached to the syringe) into a sharps container.

Do *not* recap the needle after use. Immediately discard the used needle (still attached to the syringe) into a sharps container, keeping your eyes on the needle continuously until it is placed into the container. This is part of Occupational Safety and Health Administration safety protocol. Needlestick injuries are serious, and they must be prevented.

Apply pressure to the injection site with a cotton ball or gauze, and put an adhesive bandage over it if blood is present.

Nasal sprayers also should be disposed in a sharps container.

Consult with your clinic's waste disposal service regarding the frequency of pick-up and replacement of sharps containers.

Vaccine administration errors are not acceptable, and procedures should be in place in your clinic to prevent them.

Avoid vaccine administration errors

A vaccine administration error is a situation where a patient receives the wrong vaccine, receives the vaccine by an incorrect route, receives the wrong dosage, or receives a vaccine that is expired or reconstituted with the wrong diluent. Vaccine administration errors are not acceptable, and procedures should be in place in your clinic to prevent them.

The "Rights of Medication Administration" outlined in the Centers for Disease Control and Prevention (CDC) "Pink Book" at www.cdc.gov/vaccines/pubs/pinkbook/vac-admin.html should be applied to each encounter when vaccines are administered. These rights include:

- the right patient;
- the right vaccine and diluent (when applicable);
- the right time;*
- the right dosage;
- the right route, needle length, and technique;
- the right site; and
- the right documentation.

* *Includes administering at the correct age, the appropriate interval, and before vaccine or diluent expires*

Additional information may be found in an article written by IAC's Deborah L. Wexler, MD, *Know the "7 Rights" of Vaccine Administration* (available at www.immunize.org/technically-speaking/20141101.asp).

Stop Vaccine Administration Errors Before They Happen!

- When suitable for your situation, **consult staff in choosing the vaccine products** to be used in your facility. Different brands of the same vaccine can have different schedules, age indications, or other indications. Stocking multiple brands might lead to staff confusion and vaccine administration errors.
- **Use standardized abbreviations** to avoid confusion about which vaccines have been administered. A list of standard abbreviations is available at www.cdc.gov/vaccines/acip/committee/guidance/vac-abbrev.html.
- **Keep current reference materials available for staff** on each vaccine used in your facility. Keep reference sheets for timing and spacing, recommended sites, routes, and needle lengths posted for easy reference in your vaccine preparation area.
- **Rotate vaccines** so that those with the shortest expiration dates are in the front of the storage unit. Use these first, and frequently check the storage unit to remove any expired vaccine.
- **Consider the potential for product mix-ups** when storing vaccines. Consider color-coding labels on vaccine storage containers and/or including the vaccine type and age indications. Keep vaccine diluents conveniently located.
- **Administer only vaccines that YOU have prepared** for administration. Triple check your work before you administer a vaccine, and ask other staff to do the same.
- **Avoid interruptions** when selecting and preparing the appropriate vaccine(s) for administration.
- **Educate parents and patients about vaccines to be administered** and on how important it is for them to keep a copy of immunization records on all family members. An educated patient may notice a potential error and help prevent it.

If an adverse event occurs following the administration of a vaccine, a report should be submitted to the *Vaccine Adverse Event Reporting System* (VAERS).

If an adverse event occurs following the administration of a vaccine, a report should be submitted to the *Vaccine Adverse Event Reporting System* (VAERS) at https://vaers.hhs.gov/index. Adverse events should be reported to VAERS regardless of whether or not a healthcare professional thinks the adverse event was related to the vaccine, as long as it follows administration of a dose of vaccine.

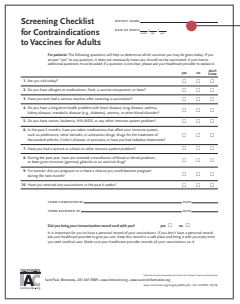
The Institute for Safe Medication Practices (ISMP), the nation's only 501(c)(3) nonprofit organization devoted entirely to medication error prevention and safe medication use, maintains a website to report vaccine administration errors. The *Vaccine Errors Reporting Program* (VERP), found at http://verp.ismp.org, was created to allow healthcare professionals and patients to report vaccine errors confidentially. By collecting and quantifying information about these errors, ISMP will be better able to advocate for changes in vaccine names, labeling, or other appropriate modifications that could reduce the likelihood of vaccine errors in the future. We encourage providers to report vaccine administration errors to ISMP. Vaccine administration errors also should be reported to VAERS.

CDC

Prepare and watch for an allergic reaction (anaphylaxis) after vaccination

Some localized itching, swelling, and/or redness for a day or two following any injection is normal and should not cause alarm. Live attenuated vaccines sometimes are followed by systemic symptoms, such as generalized mild rash or low-grade fever, a week or two after vaccination. But what must be treated promptly is an acute allergic reaction (anaphylaxis) caused by a vaccine. *You should always have and practice an emergency plan in the unlikely event of an allergic reaction.*

You should always have and practice an emergency plan in the unlikely event of an allergic reaction.


Screening Checklist for Contraindications to Vaccines for Adults

www.immunize.org/catg.d/p4065.pdf

Thorough screening using a contraindications checklist usually prevents allergic reactions to vaccines. IAC's *Screening Checklist for Contraindications to Vaccine for Adults*, available at www.immunize.org/catg.d/p4065.pdf offers a helpful tool for conducting this screening. Acute anaphylactic reactions are extremely rare, occurring after approximately 1 out of every 500,000 doses of vaccine. However, when they do occur, you MUST take immediate action. Anaphylaxis is life-threatening. If you administer vaccines you must have and practice an emergency plan. For example, IAC's *Medical Management of Vaccine Reactions in Adult Patients*, available at www.immunize.org/catg.d/p3082.pdf, includes standing orders for management of anaphylactic reactions in adults. In addition, no vaccine should ever be administered if epinephrine and the other emergency supplies are not on hand and if staff are not familiar with the anaphylaxis protocol and with cardiopulmonary resuscitation (CPR).

After you have administered any vaccine, instruct the patient to immediately report any itching, redness (with or without hives reaction), difficulty breathing, or abdominal pain that occurs following the injection.

Always report anaphylaxis and other adverse events after vaccination to VAERS

Anaphylaxis, any event listed on the *VAERS Table of Reportable Events Following Vaccination* found at https://vaers.hhs.gov/docs/VAERS_Table_of_Reportable_Events_Following_Vaccination.pdf, or any other adverse event requiring medical attention within 30 days after receipt of a vaccine must be reported to VAERS. Reporting is a requirement of the National Vaccine Injury Compensation Program. It is not necessary for you to be certain that the event was related to the vaccination in order to report it.

Prepare and watch for syncope (fainting)

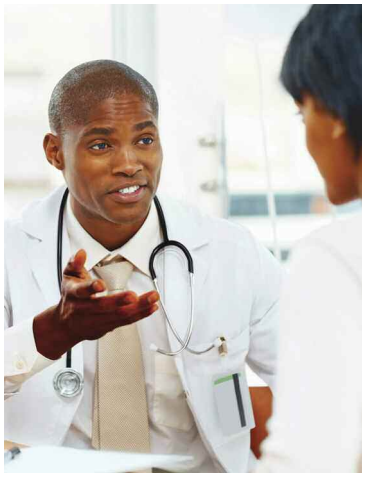
Syncope (fainting) can occur after vaccination and is most common among adolescents and young adults. Syncope can lead to serious injuries, including skull fracture and cerebral hemorrhage. Among all age groups, 80 percent of reported syncopal episodes occur within 15 minutes of vaccine administration.

Providers should take appropriate measures to prevent injuries during vaccination. To lessen the likelihood of patients becoming weak or fainting, adolescents and adults should be seated or lying down during vaccination. Vaccine providers, particularly when vaccinating adolescents, should consider observing patients (with patients seated or lying down) for 15 minutes after vaccination to decrease the risk for injury should they faint. If syncope develops, patients should be managed according to the guidance provided in IAC's *Medical Management of Vaccine Reactions in Adult Patients*, available at www.immunize.org/catg.d/p3082.pdf, until the symptoms resolve.

Communicate about appointments for subsequent doses

Before the patient leaves the clinic, be sure to schedule the patient's next appointment if subsequent doses are needed. Give the patient a personal vaccination record such as IAC's wallet-sized *Adult Immunization Record Card*, available for a nominal charge at www.immunize.org/shop/record-cards.asp. Sample cards are available for the asking at admininfo@immunize.org. Record the doses given and dates the patient should return for subsequent doses. While you are at it, be sure to give your patient a copy of *Vaccinations for Adults – You're Never Too Old to Get Vaccinated!* found at www.immunize.org/catg.d/p4030.pdf. This handout will give patients basic information about other vaccinations they might still need now or in the future – and explains when they will need them.

Before the patient leaves the clinic, be sure to schedule the patient's next appointment if subsequent doses are needed.



Understand proper spacing of doses

For the most current guidelines on vaccine dose intervals, see the "Schedule for Vaccine Administration" column of IAC's *Summary of Recommendations for Adult Immunization* located at www.immunize.org/catg.d/p2011.pdf. Increasing the interval between doses in a 2-dose or 3-dose series will not

diminish the effectiveness of the vaccine, but may delay protection against disease. You do not need to start a series over if a delay has occurred. However, you should not decrease the interval for patient scheduling convenience; this could prevent a full antibody response from occurring.

You do not need to start a series over if a delay has occurred.

MMR and varicella are live attenuated vaccines. The response to these vaccines can be reduced or negated if your patient has recently received a blood product containing immune globulin (such as a blood or plasma transfusion, or immune globulin for exposure to hepatitis). MMR and varicella vaccines should be delayed if your patient has recently received certain blood products. The length of the delay depends on the blood product the person received (up to 11 months for some blood products). Note that similar waiting periods are not required for *Zostavax* vaccine, even though it is a live attenuated vaccine like MMR and varicella. That's because the amount of antigen in *Zostavax* vaccine is so substantial that it overpowers any antibody to herpes zoster that may be in the blood product. A full discussion of this issue is beyond the scope of this *Guide*. More information on this topic is available in the Advisory Committee on Immunization Practices (ACIP) *General Best Practice Guidelines for Immunization* located at **www.cdc.gov/vaccines/hcp/acip-recs/general-recs/downloads/general-recs.pdf**.

To review the basics of vaccine administration covered in the *Guide* and in the *Immunization Techniques* video, make a copy of the *Skills Checklist for Immunization* found at **www.immunize.org/catg.d/p7010.pdf** and fill out the self-assessment section. Supervisors can use the two-page *Checklist* to help assure that staff are fully trained in providing immunizations. CDC's *Epidemiology and Prevention of Vaccine-Preventable Diseases* ("The Pink Book"), available at **www.cdc.gov/vaccines/pubs/pinkbook/index.html**, also includes an excellent chapter on vaccine administration. Another great resource is CDC's e-Learn program on vaccine administration, available at **www.cdc.gov/vaccines/hcp/admin/resource-library.html**.

STEP 5: ADMINISTERING VACCINES

Materials and Resources for You to Use

Tools for Providers

Administering Vaccines to Adults: Dose, Route, Site, and Needle Size (IAC)
www.immunize.org/catg.d/p3084.pdf

How to Administer Intramuscular and Subcutaneous Vaccine Injections to Adults (IAC)
www.immunize.org/catg.d/p2020a.pdf

How to Administer Intramuscular, Intradermal, and Intranasal Influenza Vaccines (IAC)
www.immunize.org/catg.d/p2024.pdf

Immunization Site Map (CDPH)
www.eziz.org/assets/docs/IMM-718A.pdf

Immunization Techniques: Best Practices with Infants, Children, and Adults (IAC)
www.immunize.org/dvd

Medical Management of Vaccine Reactions in Adult Patients (IAC)
www.immunize.org/catg.d/p3082.pdf

Rights of Medication Administration (CDC)
www.cdc.gov/vaccines/pubs/pinkbook/downloads/vac-admin.pdf

Skills Checklist for Immunization (IAC)
www.immunize.org/catg.d/p7010.pdf

Summary of Recommendations for Adult Immunization (IAC) – www.immunize.org/catg.d/p2011.pdf

Vaccine Administration e-Learn (CDC)
www.cdc.gov/vaccines/hcp/admin/resource-library.html

Vaccine Administration Record for Adults (IAC)
www.immunize.org/catg.d/p2023.pdf

Vaccine Adverse Event Reporting System (VAERS) (HHS) – https://vaers.hhs.gov/index

Vaccine Errors Reporting Program (VERP) (ISMP)
http://verp.ismp.org

Vaccine Information Statements (VISs) and Translations (IAC) – www.immunize.org/vis

Vaccines with Diluents: How to Use Them (IAC)
www.immunize.org/catg.d/p3040.pdf

VAERS Table of Reportable Events Following Vaccination (HHS) – https://vaers.hhs.gov/docs/VAERS_Table_of_Reportable_Events_Following_Vaccination.pdf

Additional Provider Resources

ACIP General Best Practices Guidelines for Immunization (CDC) – www.cdc.gov/vaccines/hcp/acip-recs/general-recs/downloads/general-recs.pdf

Know the "7 Rights" of Vaccine Administration (IAC)
www.immunize.org/technically-speaking/20141101.asp

Recommended Adult Immunization Schedule, United States (CDC) – www.cdc.gov/vaccines/schedules/downloads/adult/adult-combined-schedule.pdf

Information for Patients

Adult Immunization Record Card (IAC)
www.immunize.org/shop/record-cards.asp

Vaccinations for Adults – You're Never Too Old to Get Vaccinated! (IAC)
www.immunize.org/catg.d/p4030.pdf

General Information

Immunization Action Coalition (IAC)
www.immunize.org

NOTE: The publisher of each resource is shown as an acronym in the parentheses following the title. A key to these acronyms is included in *Appendix A: Acronyms and Abbreviations*.

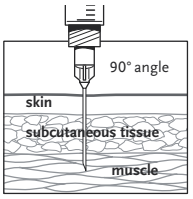
To access the current, ready-to-copy version of this piece, visit

www.immunize.org/catg.d/p3084.pdf

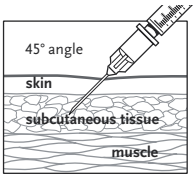
Administering Vaccines to Adults: Dose, Route, Site, and Needle Size

VACCINE	DOSE	ROUTE
Hepatitis A (HepA)	≤18 yrs: 0.5 mL ≥19 yrs: 1.0 mL	IM
Hepatitis B (HepB)	≤19 yrs: 0.5 mL ≥20 yrs: 1.0 mL	IM
HepA-HepB (Twinrix)	≥18 yrs: 1.0 mL	IM
Human papillomavirus (HPV)	0.5 mL	IM
Influenza, live attenuated (LAIV)	0.2 mL (0.1 mL into each nostril)	NAS (Intranasal spray)
Influenza, inactivated (IIV) **and recombinant** (RIV)	0.5 mL	IM
Influenza (IIV) **Fluzone Intradermal, for ages 18 through 64 years**	0.1 mL	ID (Intradermal)
Measles, Mumps, Rubella (MMR)	0.5 mL	SubCut
Meningococcal conjugate (MenACWY)	0.5 mL	IM
Meningococcal protein (MenB)	0.5 mL	IM
Meningococcal serogroup B (MenB)	0.5 mL	IM
Meningococcal polysaccharide (MPSV)	0.5 mL	SubCut
Pneumococcal conjugate (PCV13)	0.5 mL	IM
Pneumococcal polysaccharide (PPSV)	0.5 mL	IM or SubCut
Tetanus, Diphtheria (Td) **with Pertussis** (Tdap)	0.5 mL	IM
Varicella (VAR)	0.5 mL	SubCut
Zoster (HZV)	0.65 mL	SubCut

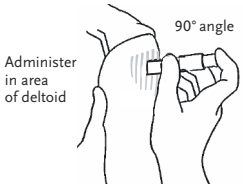
Intramuscular (IM) injection



Subcutaneous (SubCut) injection



Intradermal (ID) administration of Fluzone ID vaccine



Intranasal (NAS) administration of Flumist (LAIV) vaccine

Injection Site and Needle Size

Subcutaneous (SubCut) injection – Use a 23–25 gauge, 5/8" needle. Inject in fatty tissue over triceps.

Intramuscular (IM) injection – Use a 22–25 gauge needle. Inject in deltoid muscle of arm. Choose the needle length as indicated below:

Gender/Weight	Needle Length
Female or male less than 130 lbs	5/8"*–1"
Female or male 130–152 lbs	1"
Female 153–200 lbs	1–1 1/2"
Male 153–260 lbs	
Female 200+ lbs	1 1/2"
Male 260+ lbs	

* A 5/8" needle may be used for patients weighing less than 130 lbs (<60 kg) for IM injection in the deltoid muscle **only** if the subcutaneous tissue is not bunched and the injection is made at a 90-degree angle.

NOTE: Always refer to the package insert included with each biologic for complete vaccine administration information. CDC's Advisory Committee on Immunization Practices (ACIP) recommendations for the particular vaccine should be reviewed as well. Access the ACIP recommendations at www.immunize.org/acip.

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How to Administer Intramuscular and Subcutaneous Vaccine Injections to Adults

Intramuscular (IM) Injections

Administer these vaccines via IM route

- *Haemophilus influenzae* type b (Hib)
- Hepatitis A (HepA)
- Hepatitis B (HepB)
- Human papillomavirus (HPV)
- Influenza vaccine, injectable (IIV)
- Influenza vaccine, recombinant (RIV3)
- Meningococcal conjugate (MCV4)
- Meningococcal serogroup B (MenB)
- Pneumococcal conjugate (PCV13)
- Pneumococcal polysaccharide (PPSV23) – may also be given Subcut
- Polio (IPV) – may also be given Subcut
- Tetanus, diphtheria (Td), or with pertussis (Tdap)

Injection site

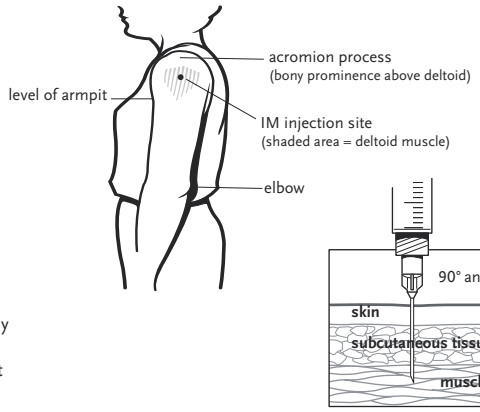
Give in the central and thickest portion of the deltoid muscle – above the level of the armpit and approximately 2–3 fingerbreadths (~2") below the acromion process. *See the diagram*. To avoid causing an injury, do not inject too high (near the acromion process) or too low.

Needle size

22–25 gauge, 1–1½" needle *(see note at right)*

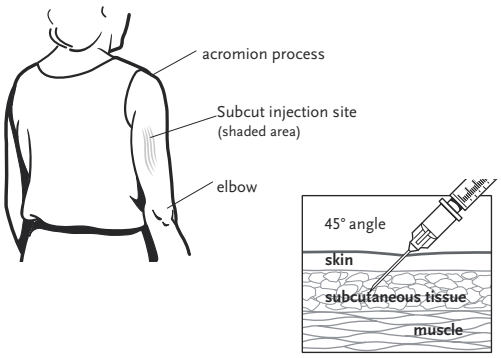
Needle insertion

- Use a needle long enough to reach deep into the muscle.
- Insert the needle at a 90° angle to the skin with a quick thrust.
- Separate two injections given in the same deltoid muscle by a minimum of 1".



Note: A ⅝" needle is sufficient in adults weighing less than 130 lbs (<60 kg) for IM injection in the deltoid muscle **only** if the subcutaneous tissue is not bunched and the injection is made at a 90° angle; a 1" needle is sufficient in adults weighing 130–152 lbs (60–70 kg); a 1–1½" needle is recommended in women weighing 153–200 lbs (70–90 kg) and men weighing 153–260 lbs (70–118 kg); a 1½" needle is recommended in women weighing more than 200 lbs (91 kg) or men weighing more than 260 lbs (more than 118 kg).

Subcutaneous (Subcut) Injections



Administer these vaccines via Subcut route

- Measles, mumps, rubella (MMR)
- Meningococcal polysaccharide (MPSV4)
- Pneumococcal polysaccharide (PPSV23) – may also be given IM
- Polio (IPV) – may also be given IM
- Varicella (Var; chickenpox)
- Zoster (HZV; shingles)

Injection site

Give in fatty tissue over the triceps. *See the diagram*.

Needle size

23–25 gauge, 5/8" needle

Needle insertion

- Pinch up on the tissue to prevent injection into the muscle. Insert the needle at a 45° angle to the skin.
- Separate two injections given in the same area of fatty tissue by a minimum of 1".

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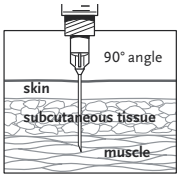
How to Administer Intramuscular, Intradermal, and Intranasal Influenza Vaccines

Intramuscular injection (IM)

Inactivated Influenza Vaccines (IIV), including recombinant hemagglutinin influenza vaccine (RIV3)

1. Use a needle long enough to reach deep into the muscle. Infants age 6 through 11 mos: 1"; 1 through 2 yrs: 1–1¼"; children and adults 3 yrs and older: 1–1½".
2. With your left hand*, bunch up the muscle.
3. With your right hand*, insert the needle at a 90° angle to the skin with a quick thrust.
4. Push down on the plunger and inject the entire contents of the syringe. There is no need to aspirate.
5. Remove the needle and simultaneously apply pressure to the injection site with a dry cotton ball or gauze. Hold in place for several seconds.
6. If there is any bleeding, cover the injection site with a bandage.
7. Put the used syringe in a sharps container.

*Use the opposite hand if you are left-handed.



Intradermal administration (ID)

Inactivated Influenza Vaccine (IIV)

1. Gently shake the microinjection system before administering the vaccine.
2. Hold the system by placing the thumb and middle finger on the finger pads; the index finger should remain free.

3. Insert the needle perpendicular to the skin, in the region of the deltoid, in a short, quick movement.
4. Once the needle has been inserted, maintain light pressure on the surface of the skin and inject using the index finger to push on the plunger. Do not aspirate.

5. Remove the needle from the skin. With the needle directed away from you and others, push very firmly with the thumb on the plunger to activate the needle shield. You will hear a click when the shield extends to cover the needle.

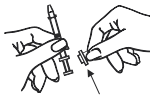
6. Dispose of the applicator in a sharps container.

Intranasal administration (NAS)

Live Attenuated Influenza Vaccine (LAIV)

1. FluMist (LAIV) is for intranasal administration only. Do not inject FluMist.
2. Remove rubber tip protector. Do not remove dose-divider clip at the other end of the sprayer.
3. With the patient in an upright position, place the tip just inside the nostril to ensure LAIV is delivered into the nose. The patient should breathe normally.

4. With a single motion, depress plunger as rapidly as possible until the dose-divider clip prevents you from going further.
5. Pinch and remove the dose-divider clip from the plunger.



6. Place the tip just inside the other nostril, and with a single motion, depress plunger as rapidly as possible to deliver the remaining vaccine.
7. Dispose of the applicator in a sharps container.

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Vaccines with Diluents: How to Use Them

Be sure to reconstitute the following vaccines correctly before administering them! Reconstitution means that the lyophilized (freeze-dried) vaccine powder or wafer in one vial must be reconstituted (mixed) with the diluent (liquid) in another.

- Only use the diluent provided by the manufacturer for that vaccine as indicated on the chart.
- ALWAYS check the expiration date on the diluent and vaccine. NEVER use expired diluent or vaccine.

Vaccine product name	Manufacturer	Lyophilized vaccine (powder)	Liquid diluent (may contain vaccine)	Time allowed between reconstitution and use, as stated in package insert*	Diluent storage environment
ActHIB (Hib)	Sanofi Pasteur	Hib	0.4% sodium chloride	24 hrs	Refrigerator
Hiberix (Hib)	GlaxoSmithKline	Hib	0.9% sodium chloride	24 hrs	Refrigerator or room temp
Imovax (RAB_{HDCV})	Sanofi Pasteur	Rabies virus	Sterile water	Immediately†	Refrigerator
M-M-R II (MMR)	Merck	MMR	Sterile water	8 hrs	Refrigerator or room temp
MenHibrix (Hib-MenCY)	GlaxoSmithKline	Hib-MenCY	0.9% sodium chloride	Immediately†	Refrigerator or room temp
Menomune (MPSV4)	Sanofi Pasteur	MPSV4	Distilled water	Single-dose vial: Immediately† Multidose vial: 35 days	Refrigerator
Menveo (MenACWY)	GlaxoSmithKline	MenA	MenCWY	8 hrs	Refrigerator
Pentacel (DTaP-IPV/Hib)	Sanofi Pasteur	Hib	DTaP-IPV	Immediately†	Refrigerator
ProQuad (MMRV)	Merck	MMRV	Sterile water	30 min	Refrigerator or room temp
RabAvert (RAB_{PCECV})	GlaxoSmithKline	Rabies virus	Sterile water	Immediately†	Refrigerator
Rotarix (RV1)‡	GlaxoSmithKline	RV1	Sterile water, calcium carbonate, and xanthan	24 hrs	Refrigerator or room temp
Varivax (VAR)	Merck	VAR	Sterile water	30 min	Refrigerator or room temp
YF-VAX (YF)	Sanofi Pasteur	YF	0.9% sodium chloride	60 min	Refrigerator
Zostavax (HZV)	Merck	HZV	Sterile water	30 min	Refrigerator or room temp

Always refer to package inserts for detailed instructions on reconstituting specific vaccines. In general, follow the steps below.

1 For single-dose vaccine products (exception is Rotarix‡), select a syringe and needle of proper length to be used for both reconstitution and administration of the vaccine. Following reconstitution, Menomune in a multidose vial will require a new needle and syringe for each dose of vaccine to be administered. For Rotarix, see the package insert.‡

2 Before reconstituting, check labels on both the lyophilized vaccine vial and the diluent to verify that
- they are the correct two products to mix together,
- the diluent is the correct volume (especially for Menomune in the multidose vial), and
- neither the vaccine nor the diluent has expired.

3 Reconstitute (i.e., mix) vaccine ***just prior to use*** by
- removing the protective caps and wiping each stopper with an alcohol swab,
- inserting needle of syringe into diluent vial and withdrawing entire contents, and
- injecting diluent into lyophilized vaccine vial and rotating or agitating to thoroughly dissolve the lyophilized powder.

4 Check the appearance of the reconstituted vaccine.
- Reconstituted vaccine may be used if the color and appearance match the description on the package insert.
- If there is discoloration, extraneous particulate matter, obvious lack of resuspension, or the vaccine cannot be thoroughly mixed, mark the vial as "DO NOT USE," return it to proper storage conditions, and contact your state or local health department immunization program or the vaccine manufacturer.

5 If reconstituted vaccine is not used immediately or comes in a multidose vial (i.e., multi-dose Menomune), be sure to
- clearly mark the vial with the date and time the vaccine was reconstituted,
- maintain the product at 2°–8°C (36°–46°F); do not freeze, and
- use only within the time indicated on chart above.

* If the reconstituted vaccine is not used within this time period, it must be discarded.
† For purposes of this guidance, IAC defines "immediately" as within 30 minutes or less.
‡ Rotarix vaccine is administered by mouth using the applicator that contains the diluent. It is not administered as an injection.

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Medical Management of Vaccine Reactions in Adult Patients

All vaccines have the potential to cause an adverse reaction. In order to minimize adverse reactions, patients should be carefully screened for precautions and contraindications before vaccine is administered (see www.immunize.org/catg.d/p3072.pdf). Even with careful screening, reactions may occur. These reactions can vary from trivial and inconvenient (e.g., soreness, itching) to severe and life threatening (e.g., anaphylaxis). Vaccine providers should be familiar with identifying immediate-type allergic reactions, including anaphylaxis, and be competent in treating these events at the time of vaccine administration. Providers should also have a plan in place to contact emergency medical services immediately in the event of a severe acute vaccine reaction. Maintenance of the airway, oxygen administration, and intravenous normal saline might be necessary. The table below describes procedures to follow if various reactions occur.

REACTION	SYMPTOMS	MANAGEMENT
Localized	Soreness, redness, itching, or swelling at the injection site	Apply a cold compress to the injection site. Consider giving an analgesic (pain reliever) or antipruritic (anti-itch) medication.
	Slight bleeding	Apply an adhesive compress over the injection site.
	Continuous bleeding	Place thick layer of gauze pads over site and maintain direct and firm pressure; raise the bleeding injection site (e.g., arm) above the level of the patient's heart.
Psychological fright and syncope (fainting)	Fright before injection is given	Have patient si
	Extreme paleness, sweating, coldness of the hands and feet, nausea, lightheadedness, dizziness, weakness, or visual disturbances	Have patient lie for several min and maintain a cloths to patien
	Fall, without loss of consciousness	Examine the pa present before Place patient fl
	Loss of consciousness	Check the patie before attempti patient flat on b patient does no
Anaphylaxis	Sudden or gradual onset of generalized itching, erythema (redness), or urticaria (hives); angioedema (swelling of the lips, face, or throat); severe bronchospasm (wheezing); shortness of breath; shock; abdominal cramping; or cardiovascular collapse.	See "Emergenc ment of Anaphy next page for d anaphylaxis.

Suggested medications for a community immunization clinic

FIRST-LINE medication

- ☐ **Epinephrine**, aqueous 1:1000 (i.e., 1 mg/mL) dilution, in ampules, vials of solution, or prefilled syringes, including epinephrine autoinjectors (e.g., EpiPen and Auvi-Q). If autoinjectors are stocked, at least three should be available.

Optional medication: H_1 antihistamines

- ☐ Diphenhydramine (e.g., Benadryl) oral (12.5 mg/5 mL liquid, 25 or 50 mg capsules/tablets) or injectable (50 mg/mL solution).
- ☐ Hydroxyzine (e.g., Atarax, Vistaril) oral (10 mg/5 mL or 25 mg/5 mL liquid, 25 mg capsules).

Suggested supplies for a community immunization clinic

- ☐ Syringes (1 and 3 cc) and needles (22 and 25 g, 1", 1½", and 2") for epinephrine, diphenhydramine, or hydroxyzine. For ampules, use filtered needles.
- ☐ Alcohol wipes
- ☐ Tourniquet*
- ☐ Adult airways (small, medium, and large)
- ☐ Adult size pocket mask with one-way valve
- ☐ Oxygen (if available)
- ☐ Stethoscope
- ☐ Sphygmomanometer (blood pressure measuring device) with adult-size and extra-large cuffs
- ☐ Tongue depressors
- ☐ Flashlight with extra batteries (for examination of the mouth and throat)
- ☐ Wristwatch with a second hand or other timing device
- ☐ Cell phone or access to onsite phone

* Applied on the extremity above the injection site to slow systemic absorption of antigen and anaphylactic mediators.

Emergency medical protocol for management of anaphylactic reactions in adults

1 If itching and swelling are confined to the injection site where the vaccination was given, observe patient closely for the development of generalized symptoms.

2 If symptoms are generalized, activate the emergency medical system (EMS; e.g., call 911) and notify the patient's physician. This should be done by a second person, while the primary healthcare professional assesses the airway, breathing, circulation, and level of consciousness of the patient. Vital signs should be monitored continuously.

3 **DRUG DOSING INFORMATION: The first-line and most important therapy in anaphylaxis is epinephrine. There are NO contraindications to epinephrine in the setting of anaphylaxis.**

- a **First-line treatment:** Administer aqueous **epinephrine** 1:1000 dilution intramuscularly, 0.01 mL/kg/dose (adult dose ranges from 0.3 mL to 0.5 mL, with maximum single dose of 0.5 mL).
- b **Optional treatment: H_1 antihistamines** for hives or itching; you may also administer **diphenhydramine** (either orally or by intramuscular injection; the standard dose is 1–2 mg/kg every 4–6 hrs, up to 50 mg maximum single dose) or **hydroxyzine** (standard oral dose is 0.5–1 mg/kg every 4–6 hrs up to 100 mg maximum single dose).

4 Monitor the patient closely until EMS arrives. Perform cardiopulmonary resuscitation (CPR), if necessary, and maintain airway. Keep patient in supine position (flat on back) unless he or she is having breathing difficulty. If breathing is difficult, patient's head may be elevated, provided blood pressure is adequate to prevent loss of consciousness. If blood pressure is low, elevate legs. Monitor blood pressure and pulse every 5 minutes.

5 If EMS has not arrived and symptoms are still present, repeat dose of epinephrine every 5–15 minutes for up to 3 doses, depending on patient's response.

6 Record the patient's reaction (e.g., hives, anaphylaxis) to the vaccine, all vital signs, medications administered to the patient, including the time, dosage, response, and the name of the medical personnel who administered the medication, and other relevant clinical information. Report the incident to the Vaccine Adverse Event Reporting System (VAERS).

7 Notify the patient's primary care physician.

These standing orders for the medical management of vaccine reactions in adult patients shall remain in effect for patients of the _____ until rescinded or until _____
NAME OF CLINIC DATE

_____ _____
MEDICAL DIRECTOR'S SIGNATURE DATE OF SIGNING

REFERENCES

Simons FE, Camargo CA. Anaphylaxis: Rapid recognition and treatment. In: UpToDate, Bochner BS (Ed). UpToDate: Waltham, MA, 2013.

Boyce JA, Assa'ad A, Burks AW, et al. Guidelines for the Diagnosis and Management of Food Allergy in the United States: Report of the NIAID-Sponsored Expert Panel. *Allergy Clin Immunol* 2010; 126(6): S1–S57.

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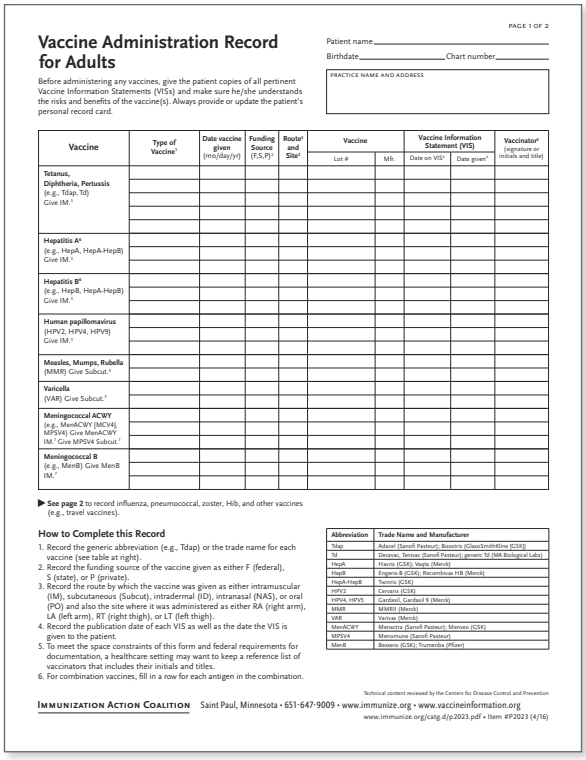

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Vaccine Administration Record for Adults

Before administering any vaccines, give the patient copies of all pertinent Vaccine Information Statements (VISs) and make sure he/she understands the risks and benefits of the vaccine(s). Always provide or update the patient's personal record card.

Patient name_____

Birthdate_____ Chart number_____

PRACTICE NAME AND ADDRESS

Vaccine	Type of Vaccine[1]	Date vaccine given (mo/day/yr)	Funding Source (F,S,P)[2]	Route[3] and Site[3]	Vaccine		Vaccine Information Statement (VIS)		Vaccinator[4] (signature or initials and title)
					Lot #	Mfr.	Date on VIS[5]	Date given[6]	
Tetanus, Diphtheria, Pertussis (e.g., Tdap, Td) Give IM.[3]									
Hepatitis A[A] (e.g., HepA, HepA-HepB) Give IM.[3]									
Hepatitis B[B] (e.g., HepB, HepA-HepB) Give IM.[3]									
Human papillomavirus (HPV2, HPV4, HPV9) Give IM.[3]									
Measles, Mumps, Rubella (MMR) Give Subcut.[3]									
Varicella (VAR) Give Subcut.[3]									
Meningococcal ACWY (e.g., MenACWY [MCV4, MPSV4] Give MenACWY IM.[7] Give MPSV4 Subcut.[7]									
Meningococcal B (e.g., MenB) Give MenB IM.[7]									

▶ **See page 2** to record influenza, pneumococcal, zoster, Hib, and other vaccines (e.g., travel vaccines).

How to Complete this Record

1. Record the generic abbreviation (e.g., Tdap) or the trade name for each vaccine (see table at right).
2. Record the funding source of the vaccine given as either F (federal), S (state), or P (private).
3. Record the route by which the vaccine was given as either intramuscular (IM), subcutaneous (Subcut), intradermal (ID), intranasal (NAS), or oral (PO) and also the site where it was administered as either RA (right arm), LA (left arm), RT (right thigh), or LT (left thigh).
4. Record the publication date of each VIS as well as the date the VIS is given to the patient.
5. To meet the space constraints of this form and federal requirements for documentation, a healthcare setting may want to keep a reference list of vaccinators that includes their initials and titles.
6. For combination vaccines, fill in a row for each antigen in the combination.

Abbreviation	Trade Name and Manufacturer
Tdap	Adacel (Sanofi Pasteur); Boostrix (GlaxoSmithKline [GSK])
Td	Decavac, Tenivac (Sanofi Pasteur); generic Td (MA Biological Labs)
HepA	Havrix (GSK); Vaqta (Merck)
HepB	Engerix-B (GSK); Recombivax HB (Merck)
HepA-HepB	Twinrix (GSK)
HPV2	Cervarix (GSK)
HPV4, HPV9	Gardasil, Gardasil 9 (Merck)
MMR	M-M-RII (Merck)
VAR	Varivax (Merck)
MenACWY	Menactra (Sanofi Pasteur); Menveo (GSK)
MPSV4	Menomune (Sanofi Pasteur)
MenB	Bexsero (GSK); Trumenba (Pfizer)

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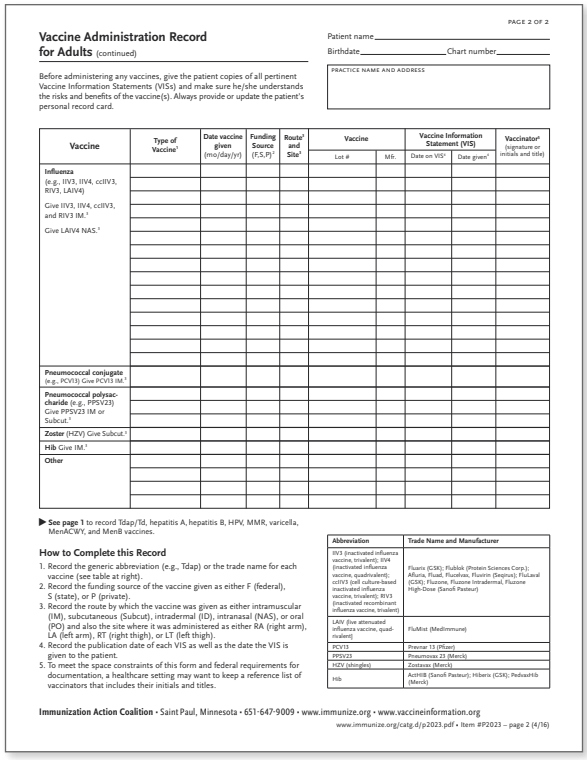

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Vaccine Administration Record for Adults (continued)

Before administering any vaccines, give the patient copies of all pertinent Vaccine Information Statements (VISs) and make sure he/she understands the risks and benefits of the vaccine(s). Always provide or update the patient's personal record card.

Patient name_____

Birthdate_____ Chart number_____

PRACTICE NAME AND ADDRESS

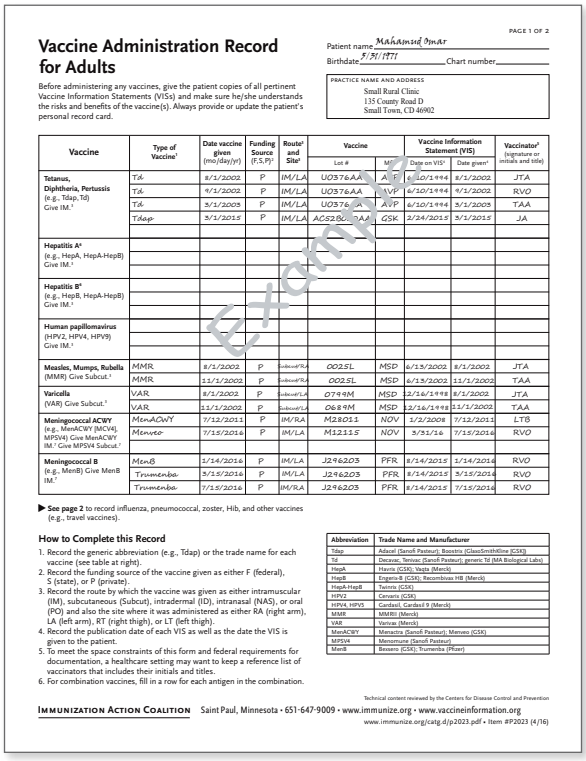
Vaccine	Type of Vaccine[1]	Date vaccine given (mo/day/yr)	Funding Source (F,S,P)[2]	Route[3] and Site[3]	Vaccine		Vaccine Information Statement (VIS)		Vaccinator[4] (signature or initials and title)
					Lot #	Mfr.	Date on VIS[5]	Date given[6]	
Influenza (e.g., IIV3, IIV4, ccIIV3, RIV3, LAIV4) Give IIV3, IIV4, ccIIV3, and RIV3 IM.[3] Give LAIV4 NAS.[3]									
Pneumococcal conjugate (e.g., PCV13) Give PCV13 IM.[3]									
Pneumococcal polysaccharide (e.g., PPSV23) Give PPSV23 IM or Subcut.[3]									
Zoster (HZV) Give Subcut.[3]									
Hib Give IM.[3]									
Other									

▶ **See page 1** to record Tdap/Td, hepatitis A, hepatitis B, HPV, MMR, varicella, MenACWY, and MenB vaccines.

How to Complete this Record

1. Record the generic abbreviation (e.g., Tdap) or the trade name for each vaccine (see table at right).
2. Record the funding source of the vaccine given as either F (federal), S (state), or P (private).
3. Record the route by which the vaccine was given as either intramuscular (IM), subcutaneous (Subcut), intradermal (ID), intranasal (NAS), or oral (PO) and also the site where it was administered as either RA (right arm), LA (left arm), RT (right thigh), or LT (left thigh).
4. Record the publication date of each VIS as well as the date the VIS is given to the patient.
5. To meet the space constraints of this form and federal requirements for documentation, a healthcare setting may want to keep a reference list of vaccinators that includes their initials and titles.

Abbreviation	Trade Name and Manufacturer
IIV3 (inactivated influenza vaccine, trivalent); IIV4 (inactivated influenza vaccine, quadrivalent); ccIIV3 (cell culture-based inactivated influenza vaccine, trivalent); RIV3 (inactivated recombinant influenza vaccine, trivalent)	Fluarix (GSK); Flublok (Protein Sciences Corp.); Afluria, Fluad, Fluzone, Fluvirin (Seqirus); FluLaval (GSK); Fluzone, Fluzone Intradermal, Fluzone High-Dose (Sanofi Pasteur)
LAIV (live attenuated influenza vaccine, quadrivalent)	FluMist (Medimmune)
PCV13	Prevnar 13 (Pfizer)
PPSV23	Pneumovax 23 (Merck)
HZV (shingles)	Zostavax (Merck)
Hib	ActHIB (Sanofi Pasteur); Hiberix (GSK); PedvaxHib (Merck)



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Vaccine Administration Record for Adults

Before administering any vaccines, give the patient copies of all pertinent Vaccine Information Statements (VISs) and make sure he/she understands the risks and benefits of the vaccine(s). Always provide or update the patient's personal record card.

Patient name Mahamud Omar

Birthdate 5/31/1971 Chart number_____

PRACTICE NAME AND ADDRESS
Small Rural Clinic
135 County Road D
Small Town, CD 46902

Vaccine	Type of Vaccine[1]	Date vaccine given (mo/day/yr)	Funding Source (F,S,P)[2]	Route[3] and Site[3]	Vaccine		Vaccine Information Statement (VIS)		Vaccinator[4] (signature or initials and title)
					Lot #	Mfr.	Date on VIS[5]	Date given[6]	
Tetanus, Diphtheria, Pertussis (e.g., Tdap, Td) Give IM.[3]	Td	8/1/2002	P	IM/LA	U0376AA	AVP	6/10/1994	8/1/2002	JTA
	Td	9/1/2002	P	IM/LA	U0376AA	AVP	6/10/1994	9/1/2002	RVO
	Td	5/1/2003	P	IM/LA	U0376AA	AVP	6/10/1994	5/1/2003	TAA
	Tdap	5/1/2013	P	IM/LA	AC52B044AA	GSK	2/24/2013	5/1/2013	JA
Hepatitis A[A] (e.g., HepA, HepA-HepB) Give IM.[3]									
Hepatitis B[B] (e.g., HepB, HepA-HepB) Give IM.[3]									
Human papillomavirus (HPV2, HPV4, HPV9) Give IM.[3]									
Measles, Mumps, Rubella (MMR) Give Subcut.[3]	MMR	8/1/2002	P	subcut/RA	0025L	MSD	6/13/2002	8/1/2002	JTA
	MMR	11/1/2002	P	subcut/RA	0025L	MSD	6/13/2002	11/1/2002	TAA
Varicella (VAR) Give Subcut.[3]	VAR	8/1/2002	P	subcut/LA	0794M	MSD	12/16/1998	8/1/2002	JTA
	VAR	11/1/2002	P	subcut/LA	0684M	MSD	12/16/1998	11/1/2002	TAA
Meningococcal ACWY (e.g., MenACWY [MCV4, MPSV4] Give MenACWY IM.[7] Give MPSV4 Subcut.[7]	MenACWY	7/12/2011	P	IM/RA	M28051	NOV	1/2/2008	7/12/2011	LTB
	Menveo	7/15/2016	P	IM/LA	M12115	NOV	3/31/16	7/15/2016	RVO
Meningococcal B (e.g., MenB) Give MenB IM.[7]	MenB	1/14/2016	P	IM/LA	J296203	PFR	8/14/2015	1/14/2016	RVO
	Trumenba	3/15/2016	P	IM/LA	J296203	PFR	8/14/2015	3/15/2016	RVO
	Trumenba	7/15/2016	P	IM/RA	J296203	PFR	8/14/2015	7/15/2016	RVO

▶ **See page 2** to record influenza, pneumococcal, zoster, Hib, and other vaccines (e.g., travel vaccines).

How to Complete this Record

1. Record the generic abbreviation (e.g., Tdap) or the trade name for each vaccine (see table at right).
2. Record the funding source of the vaccine given as either F (federal), S (state), or P (private).
3. Record the route by which the vaccine was given as either intramuscular (IM), subcutaneous (Subcut), intradermal (ID), intranasal (NAS), or oral (PO) and also the site where it was administered as either RA (right arm), LA (left arm), RT (right thigh), or LT (left thigh).
4. Record the publication date of each VIS as well as the date the VIS is given to the patient.
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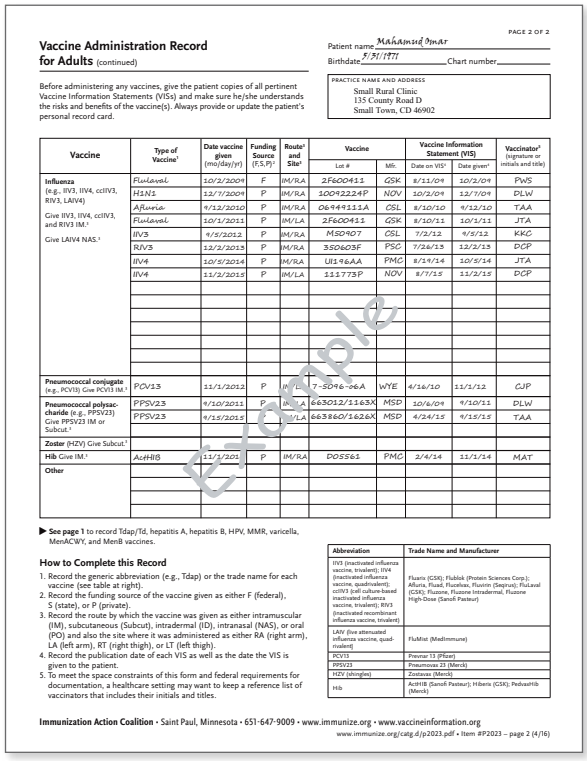

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Vaccine Administration Record for Adults (continued)

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Patient name Mahamud Omar

Birthdate 5/31/1971 Chart number_____

PRACTICE NAME AND ADDRESS
Small Rural Clinic
135 County Road D
Small Town, CD 46902

Vaccine	Type of Vaccine[1]	Date vaccine given (mo/day/yr)	Funding Source (F,S,P)[2]	Route[3] and Site[3]	Vaccine		Vaccine Information Statement (VIS)		Vaccinator[4] (signature or initials and title)
					Lot #	Mfr.	Date on VIS[5]	Date given[6]	
Influenza (e.g., IIV3, IIV4, ccIIV3, RIV3, LAIV4) Give IIV3, IIV4, ccIIV3, and RIV3 IM.[3] Give LAIV4 NAS.[3]	FluLaval	10/2/2009	F	IM/RA	2F600411	GSK	8/11/09	10/2/09	PWS
	H1N1	12/7/2009	P	IM/RA	10092224P	NOV	10/2/09	12/7/09	PLW
	Afluria	9/12/2010	P	IM/RA	06944111A	CSL	8/10/10	9/12/10	TAA
	FluLaval	10/1/2011	P	IM/LA	2F600411	GSK	8/10/11	10/1/11	JTA
	IIV3	9/5/2012	P	IM/RA	MSD907	CSL	7/2/12	9/5/12	KKC
	RIV3	12/2/2013	P	IM/RA	330603F	PSC	7/26/13	12/2/13	DCP
	IIV4	10/5/2014	P	IM/RA	UI196AA	PMC	8/14/14	10/5/14	JTA
	IIV4	11/2/2015	P	IM/LA	111773P	NOV	8/7/15	11/2/15	DCP
Pneumococcal conjugate (e.g., PCV13) Give PCV13 IM.[3]	PCV13	11/1/2012	P	IM/LA	7-5096-06A	WYE	4/16/10	11/1/12	CJP
Pneumococcal polysaccharide (e.g., PPSV23) Give PPSV23 IM or Subcut.[3]	PPSV23	9/10/2011	P	IM/LA	663012/1163X	MSD	10/6/09	9/10/11	PLW
	PPSV23	9/15/2015	P	IM/LA	663860/1626X	MSD	4/24/15	9/15/15	TAA
Zoster (HZV) Give Subcut.[3]									
Hib Give IM.[3]	ActHIB	11/1/2011	P	IM/RA	D05561	PMC	2/4/14	11/1/14	MAT
Other									

▶ **See page 1** to record Tdap/Td, hepatitis A, hepatitis B, HPV, MMR, varicella, MenACWY, and MenB vaccines.

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LAIV (live attenuated influenza vaccine, quadrivalent)	FluMist (Medimmune)
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PPSV23	Pneumovax 23 (Merck)
HZV (shingles)	Zostavax (Merck)
Hib	ActHIB (Sanofi Pasteur); Hiberix (GSK); PedvaxHib (Merck)

To access CDC's Vaccine Administration e-Learn course, visit

www.cdc.gov/vaccines/hcp/admin/resource-library.html