

Immunization Best Practices and Influenza Vaccines

JoEllen Wolicki, BSN, RN
Nurse Educator

Communications Education Partnership Branch

General Recommendations

- ❑ Failure to adhere to recommended specifications for storage and handling of vaccines can reduce or destroy their potency, resulting in inadequate or no immune response in the recipient.
- ❑ Recommendations for route, site, and dosage of vaccines are derived from data from clinical trials, practical experience, normal periodicity of health care visits, and theoretical considerations.
- ❑ Immunization providers should be knowledgeable in proper storage and handling and administration of vaccines.



Skills Checklist for Immunization

The Skills Checklist is a self-assessment tool for health care staff who administer immunizations. To complete it, review the competency areas below and the clinical skills, techniques, and procedures outlined for each of them. Score yourself in the Self-Assessment column. If you check **Need to Improve**, you indicate further study, practice, or change is needed. When you check **Meets or Exceeds**, you indicate you believe you are performing at the expected level of competence, or higher.

Supervisors: Use the Skills Checklist to clarify responsibilities and expectations for who administer vaccines. When you use it for performance reviews, give staff the

opportunity to score themselves in advance. Next, observe their performance as they provide immunizations to several patients and score in the **Supervisor Review** columns. If improvement is needed, meet with them to develop a **Plan of Action** (p. 2) that will help them achieve the level of competence you expect; circle desired actions or write in others.

The DVD "Immunization Techniques: Best Practices with Infants, Children, and Adults" shows that staff achieve the expected level of competence.

Competency	Clinical Skills, Techniques, and Procedures
A. Patient/Parent Education	<ol style="list-style-type: none"> 1. Welcomes patient/family, establishes rapport, and answers or 2. Explains what vaccines will be given and which type(s) of info 3. Accommodates language or literacy barriers and special need help make them feel comfortable and informed about the pr 4. Verifies patient/parents received the Vaccine Information Stat vaccines and had time to read them and ask questions. 5. Screens for contraindications. (MA: score NA-not applicable) 6. Reviews comfort measures and after care instructions with p
B. Medical Protocols	<ol style="list-style-type: none"> 1. Identifies the location of the medical protocols (i.e. Immuniz 2. Identifies the location of the epinephrine, its administration is 3. Maintains up-to-date CPR certification. 4. Understands the need to report any needlestick injury and to
C. Vaccine Handling	<ol style="list-style-type: none"> 1. Checks vial expiration date. Double-checks vial label and con 2. Maintains aseptic technique throughout. 3. Selects the correct needle size for IM and SC. 4. Shakes vaccine vial and/or reconstitutes and mixes using the i 5. Labels each filled syringe or uses labeled tray to keep them i 6. Demonstrates knowledge of proper vaccine handling, e.g. pr

Adapted from California Department of Public Health • Immunization Services

Immunization Action Coalition • Saint Paul, Minnesota • (651) 647-9009 • www.vaccineinformation.org

Competency	Clinical Skills, Techniques, and Procedures	Self-Assessment		Supervisor Review		Plan of Action*
		Need to Improve	Meets or Exceeds	Need to Improve	Meets or Exceeds	
D. Administering Immunizations	1. Rechecks the physician's order or instructions against prepared syringes.					
	2. Washes hands and if office policy puts on disposable gloves.					
	3. Demonstrates knowledge of the appropriate route for each vaccine.					
	4. Positions patient and/or restrains the child with parent's help; locates anatomic landmarks specific for IM or SC.					
	5. Prep the site with an alcohol wipe using a circular motion from the center to a 2" to 3" circle. Allows alcohol to dry.					
	6. Controls the limb with the non-dominant hand; holds the needle an inch from the skin and inserts it quickly at the appropriate angle (45° for SC or 90° for IM).					
	7. Injects vaccine using steady pressure; withdraws needle at angle of insertion.					
	8. Applies gentle pressure to injection site for several seconds with a dry cotton ball.					
	9. Properly disposes of needle and syringe in sharps container. Properly disposes of live vaccine vial.					
	10. Encourages comfort measures before, during and after the procedure.					
E. Records Procedures	1. Fully documents each immunization in patient's chart: date, lot number, manufacturer, site, VIS date, name/initials.					
	2. If applicable, demonstrates ability to use IZ registry or computer to call up patient record, assess what is due today, and update computer immunization history.					
	3. Asks for and updates patient's record of immunizations and reminds them to bring it to each visit.					

Plan of Action:

Circle desired next steps and write in the agreed deadline and date for the follow-up performance review. **a.** Watch video on Immunization techniques. **b.** Review office protocols. **c.** Review manuals, textbooks, wall charts or other guides. **d.** Review package inserts. **e.** Review vaccine handling guidelines or video. **f.** Observe other staff with patients. **g.** Practice injections. **h.** Read Vaccine Information Statements. **i.** Be mentored by someone who has these skills. **j.** Role play with other staff interactions with parents and patients, including age-appropriate comfort measures. **k.** Attend a skills training or other courses or training. **l.** Attend health care customer satisfaction or cultural competency training. **m.** Renew CPR certification. **Other:**

Employee Signature

Date

Supervisor Signature

Date

Plan of Action Deadline

Date of Next Performance Review

Influenza Vaccine Administration Errors

- ❑ **CDC has received reports of flu vaccine administration errors including administering:**
 - Improperly stored vaccine.
 - Expired vaccine.
 - Vaccine using the wrong route.
 - The wrong product based on age indications.
 - The wrong dosage (amount).

Vaccine Storage Equipment

- ❑ CDC recommends stand-alone or pharmacy grade/purpose-built units.

<div><div>Store in Freezer</div><div>Between -58°F and +5°F (-50°C -15°C)</div><div>VAR†</div><div>HZV†</div><div>MMRV†</div><div>MMR‡§</div></div>	<div><div>Store in Refrigerator</div><div>Between 35°F and 46°F (2°C and 8°C)</div><div>MMR‡§</div><div>HepA HepB HepA-HepB</div><div>Hib† Hib-HepB</div><div>Human papillomavirus (HPV2 and HPV4†)</div><div>Influenza (LAIV, IIV3†, IIV4†, RIV†)</div><div>IPV†</div><div>Meningococcal-containing (Hib-MenCY,† MCV4,† MPSV4)</div><div>Pneumococcal (PCV13 and PPSV23)</div><div>Rotavirus† (RV1 and RV5)</div><div>Diphtheria toxoid-, Tetanus toxoid-, and Pertussis-containing (DT, DTaP, DTaP-HepB-IPV, DTaP-IPV, DTaP-IPV/Hib, Tdap, Td, TT)</div></div>
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†Protect the following vaccines from light: Varivax, Zostavax, ProQuad, M-M-R II, Hiberix, Gardasil, Afluria, Agriflu, Fluarix, Flublok, Flucelvax, FluLaval, Fluvirin, IPOL, MenHibrix, Menveo, Rotarix, and RotaTeq.
§Unreconstituted lyophilized (freeze-dried) MMR may be frozen or refrigerated.

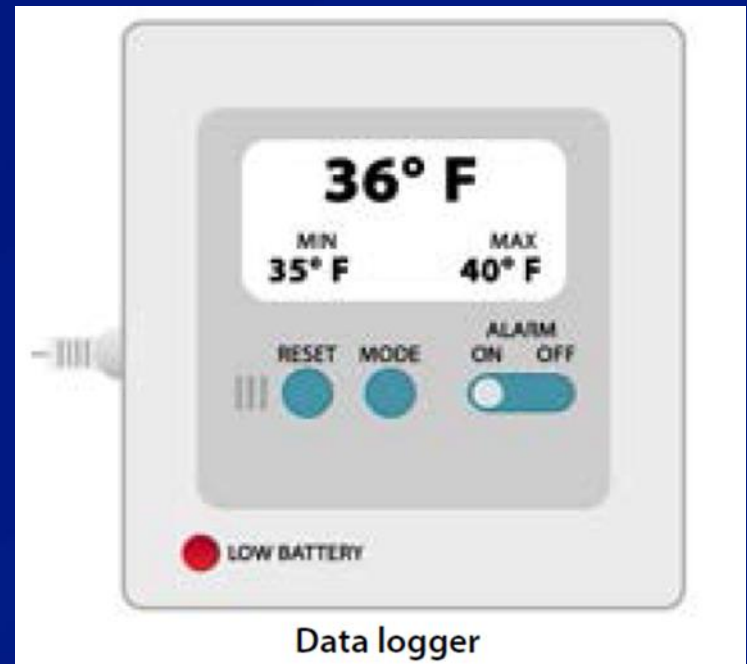
**Dormitory-style
NOT Allowed for VFC Vaccines or
Recommended for ANY Vaccine Storage**



Temperature Monitoring Equipment

❑ CDC recommends:

- Calibrated temperature monitoring devices with a Certificate of Traceability and Calibration Testing (also known as Report of Calibration).
- Continuous temperature monitoring devices (digital data logger).



Administration of Expired Live Attenuated Influenza Vaccine (LAIV)*

- ❑ 866 reports of administration of expired LAIV were reported to VAERS from July 1, 2007, through June 30, 2014.**
 - 18.4% of all LAIV reports to VAERS.
 - LAIV generally has an 18-week shelf life; inactivated influenza vaccine generally lasts until the end of flu season (June 30).
- ❑ No adverse health events documented in 98% of the reports.**
- ❑ In 95% of expired LAIV reports, the vaccination occurred after the first week in November, which is approximately 18 weeks from July 1st.**

*Haber P, Schembri CP, Lewis P, Hibbs B, Shimabukuro T. Notes from the Field: Reports of Expired Live Attenuated Influenza Vaccine Being Administered - United States, 2007–2014. *MMWR* 2014; 63(35):773.

Best Practices and Expiration Dates

- ❑ Check vaccine expiration dates weekly.**
- ❑ Remove expired vaccine from inventory.**
- ❑ Place vaccines with earliest expiration dates in front of those with later expiration dates.**

Influenza Vaccine and Off-site Clinics

- ❑ **CDC recommends that vaccine be delivered directly to an off-site/satellite facility.**
- ❑ **If vaccine must be transported to the facility, DO:**
 - Transport in a portable refrigerator or qualified container/packout.
 - Limit the amount of vaccines to only what is needed for that workday.
 - Transport vaccine container in the vehicle (not the trunk).
 - Limit the total transport and workday time to no more than 8 hours.

Temperature Monitoring

- ❑ **Record temperature inside the packed container, along with date, time, and your initials:**
 - At beginning of transport.
 - Upon arrival at facility.
 - When any remaining vaccines are returned to primary storage facility.
- ❑ **Upon arrival at facility, immediately transfer vaccines to a refrigerator that maintains recommended temperature range and record the temperature, time, and initials.**
 - Record the temperature at least twice during workday.



VACCINE ADMINISTRATION

Vaccine Administration Best Practices

- ❑ **Maintain proper infection control practices while preparing and administering vaccines.**
 - Always use aseptic technique.
- ❑ **Use proper hand hygiene techniques before preparing vaccines.**
- ❑ **Prepare vaccines in a clean, designated medication area not adjacent to any area where potentially contaminated items are placed.**
- ❑ **Prepare vaccines just prior to administration.**

Vaccine Administration “Don’ts”

❑ NEVER:

- Use the same needle to administer vaccines to more than one patient.
- Use the same syringe to administer vaccines to more than one patient, even if the needle is changed.
- Enter a vial with a used needle or syringe.
- Use partial doses from two or more vials to obtain a full dose.
- Use a single-dose vial for more than one patient or dose.
- Transfer vaccine from one syringe to another.

Handouts: Clinic Resources

Standing Orders for Administering Vaccines

Administering Vaccines

Adult Vaccination

- >> Administering vaccines
- >> Documenting vaccination
- >> Patient-friendly schedules
- >> Screening questionnaires
- >> Standing orders
- >> Vaccine summaries
- >> Vaccine recommendations

Documenting Vaccination

Parent Handouts

Patient Schedules

Questions and Answers

Recommendations

Screening Questionnaires

Standing Orders

Storage and Handling

Supplies Checklist

Temperature Logs

Vaccine Reactions

Vaccine Summaries

Chickpox (varicella) vaccine - Children and teens

Eligible health professionals may vaccinate children and teens who meet any on this form [PF3080A]

Chickpox (varicella) vaccine - Adults

Eligible health professionals may vaccinate adults who meet any of the criteria on this form [PF3080B]

Diphtheria, tetanus, acellular pertussis vaccine (DTaP) - Infant Children

Eligible health professionals may vaccinate children under 7 who meet any of this form [PF3073]

Hepatitis A vaccine - Children and teens

Eligible health professionals may vaccinate children and teens who meet any on this form [PF3077A]

Hepatitis A vaccine - Adults

Eligible health professionals may vaccinate adults who meet any of the criteria on this form [PF3077B]

Hepatitis B vaccine - Children and teens

Eligible health professionals may vaccinate children and teens who meet any on this form [PF3076A]

Hepatitis B - Admission orders for labor & delivery and newborn prevent HBV transmission

For HBsAg screening in labor and delivery units and hepatitis B immunization nurseries [PF2130]

Hepatitis B vaccine - Adults

Eligible health professionals may vaccinate adults who meet any of the criteria on this form [PF3076B]

Haemophilus influenzae type b vaccine - Children and teens

Eligible health professionals may vaccinate children and teens who meet any of the criteria on this form [PF3083]

Human papillomavirus vaccine (HPV) - Children and teens

Eligible health professionals may vaccinate children and teens who meet any of the criteria on this form [PF3090]

Standing Orders for Administering DTaP to Children Younger than Age 7 Years

Purpose: To reduce morbidity and mortality from tetanus, diphtheria, and pertussis by vaccinating all infants and children who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices.

Policy: Under these standing orders, eligible nurses and other healthcare professionals (e.g., pharmacists), where allowed by state law, may vaccinate infants and children who meet the criteria below.

Procedure

1. Identify infants and children ages 2 months through 6 years who have not completed a diphtheria, tetanus, and acellular pertussis (DTaP) vaccination series.

2. Screen all patients for contraindications and precautions to DTaP:

Contraindications:

- a history of a severe allergic reaction (e.g., anaphylaxis) after a previous dose of DTaP or to a DTaP component. For a list of vaccine components, go to www.cdc.gov/vaccines/imzmanual/html/nis/vaccine/dtaap-table-2.pdf.
- a history of encephalopathy (e.g., coma, decreased level of consciousness) within 7 days of a previous dose of pertussis.

Precautions:

- moderate or severe acute illness with or without fever
- history of anaphylactic hypersensitivity reactions after a prior dose of vaccination until at least 10 years have elapsed since
- level of IgG anti-Tx (C) is higher than attributable to a recent infection or a treatment regimen has been established
- collapse or shock-like state (e.g., hypotensive hypotension)
- seizure within 3 days of a previous dose of DTaP
- persistent, inconsolable crying lasting more than 3 hours in
- history of Guillain-Barre syndrome within 6 weeks of prior

3. Provide all patients (or, in the case of minors, their parent or legal representative) a Vaccine Information Statement (VIS). You must document in the patient's record the date it was given to the patient (parent/legal representative) and the date it was given to the patient (parent/legal representative) in their native language, if available and preferred. These can be found at www.cdc.gov/vaccines/imzmanual/html/nis/vaccine/dtaap-table-2.pdf.

4. Provide routine vaccination with DTaP at ages 2 months, 4 months, 6 months, 15-18 months, and 4-6 years. Administer 0.5 mL DTaP intramuscularly in the vastus lateralis or the deltoid muscle (the deltoid muscle in the vastus lateralis) for a 22-25 and body mass index (BMI) younger than age 12 (BMI < 12). Infants aged 12-23 months may be vaccinated in the vastus lateralis (Note: A 1/2" needle may be used for patients weighing less than 15 pounds; a 1" needle is not needed and the injection is made at a 45-degree angle).

5. For patients who have not received DTaP at the ages specified in the schedule subsequent doses by observing minimum intervals of 4 weeks and fourth dose, if the child is age 4-6 years and the fourth additional dose at least 6 calendar months after the fourth dose.

6. Document each patient's vaccine administration information and a. Medical chart: Record the date the vaccine was administered, route, and the name and title of the person administering the vaccine. b. Personal immunization record card: Record the date of vaccination.

7. Be prepared for management of a medical emergency related to a medical procedure available, as well as equipment and medication. c. Report of adverse reactions to DTaP vaccine to the National Vaccine Adverse Event Reporting System (VAERS) report forms at www.vaers.hhs.gov or (800) 822-7967. VAERS report forms are available at www.vaers.hhs.gov and remain in effect for all patients of the practice.

Medical Director's signature:

For standing orders for other vaccines, go to www.immunize.org/standing-orders

Immunization Action Coalition • 1015 Valley Road • St. Paul, MN 55108 •

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Using Standing Orders for Administering Vaccines: What You Should Know

The use of standing orders for vaccination facilitates the delivery of immunization services to patients in clinics, hospitals, and community settings.

Standing orders have been shown to increase vaccination coverage rates.

What are standing orders?

Standing orders authorize nurses, pharmacists, and other appropriately trained healthcare personnel, where allowed by state law, to assess a patient's immunization status and administer vaccinations according to a protocol approved by an institution, physician, or other authorized practitioner. The standing orders work by enabling assessment and vaccination of the patient without the need for clinician examination or direct order from the attending provider at the time of the interaction. Standing orders can be established for the administration of one or more specific vaccines to a broad or narrow set of patients in healthcare settings such as clinics, hospitals, pharmacies, and long-term care facilities.

Who recommends standing orders for vaccination?

The Community Preventive Services Task Force (Task Force) and the Task Force on Community Preventive Services (Task Force) recommend standing orders for vaccinations based on strong evidence of effectiveness in improving vaccination rates:

1. in adults and children,
2. when used alone or when combined with additional interventions, and
3. across a range of settings and populations.

Read the full Task Force Finding and Rationale Statement at www.thecommunityguide.org/vaccines/standingorders.html.

The Centers for Disease Control and Prevention (CDC), CDC's Advisory Committee on Immunization Practices (ACIP), specifically recommends standing orders for influenza and pneumococcal vaccinations and several other vaccines (e.g., hepatitis B, varicella). See the Use of Standing Orders Program to Increase Adult Vaccination Rates: Recommendations of the ACIP, MMWR 2000;49 (No. RR-1) at www.cdc.gov/mmwr/preview/mmwrhtml/rr4901a2.htm.

What are the elements of a standing order?

A comprehensive standing order should include the following elements:

1. who is targeted to receive the vaccine;
2. how to determine if a patient needs or should receive a particular vaccination (e.g., indications, contraindications, and precautions);
3. procedures for administering the vaccine (e.g., vaccine name, schedule for vaccination, appropriate needle size, vaccine dosage, route of administration);

4. provision of any federally required information (e.g., Vaccine Information Statement);

5. how to document vaccination in the patient record;

6. a protocol for the management of any medical emergency related to the administration of the vaccine; and

7. how to report possible adverse events occurring after vaccination.

Who is authorized to administer vaccines under standing orders?

Each of the 50 states separately regulates the practice of medicine, nursing, pharmacy, and other health-related professions. For further information about who can carry out standing orders in your state, contact your state immunization program or the appropriate state body (e.g., state board of medical/nursing/pharmacy practice).

Who is authorized to sign the standing order?

In general, standing orders are approved by an institution, physician, or authorized practitioner. State law or regulatory agency might authorize other healthcare professionals to sign standing orders.

What should be done with the standing orders after they have been signed?

Signed standing orders should be kept with all other signed medical procedures and protocols that are operational in one's clinic setting. A copy should also be available for clinic staff who operate under these standing orders.

Do standing orders need to be renewed (e.g., yearly)?

Generally, standing orders will include an implementation date as well as an expiration date. Periodic review of standing orders is important, because vaccine recommendations may change over time.

Where can I find sample standing orders?

The Immunization Action Coalition has developed templates of standing orders for vaccines that are routinely recommended to children and adults. They are updated as needed and reviewed for technical accuracy by immunization experts at CDC. The most current versions can be accessed by going to www.immunize.org standing orders.

Technical content reviewed by the Centers for Disease Control and Prevention.

www.immunize.org/standing-orders.pdf • Issue #F3086 (10/14)

Provider Predrawn Syringes

- ❑ **Predrawing vaccine is not recommended:**
 - Increases risk for administration errors.
 - May lead to vaccine waste.
 - Can cause bacterial growth in vaccines that do not contain a preservative.
 - Administration syringes are not designed for storage.
- ❑ **Consider using manufacturer-filled syringes for large immunization events because they are designed for both storage and administration.**

Provider Predrawn Syringes

- ❑ At clinic site, no more than 1 multidose vial or 10 doses should be drawn up at one time by each vaccinator.
- ❑ If more than one vaccine type is being administered, set up separate administration stations for each vaccine type to prevent medication errors.
- ❑ Patient flow should be monitored to avoid drawing up unnecessary doses.
- ❑ At end of workday, any remaining vaccine in provider predrawn syringes should be discarded.




RESOURCES






Resources for Staff Education

- ❑ Competency-based education for staff is critical.
- ❑ Multiple education products available free through the CDC website:
 - Immunization courses (webcasts and online self-study)
 - Netconferences
 - You Call the Shots self-study modules
- ❑ Continuing education available.

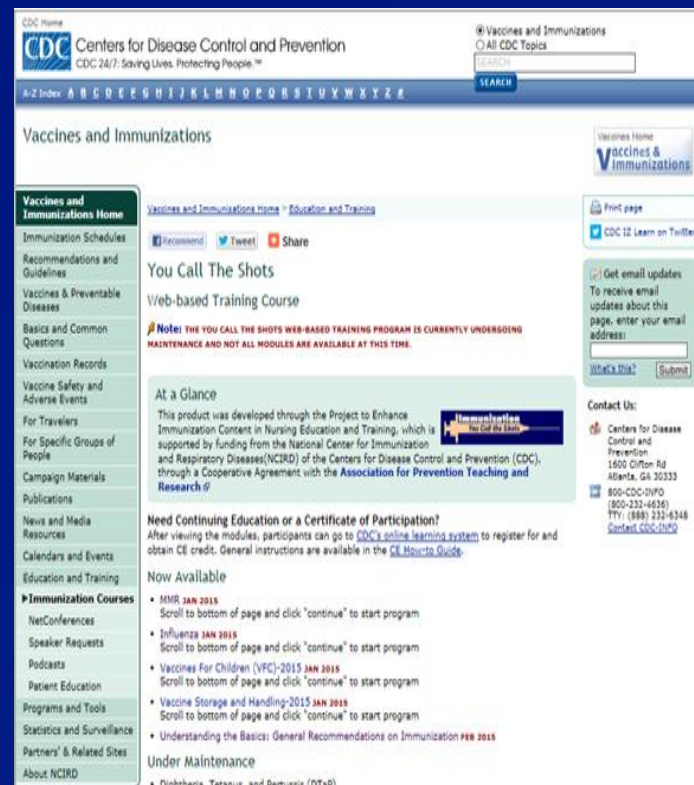
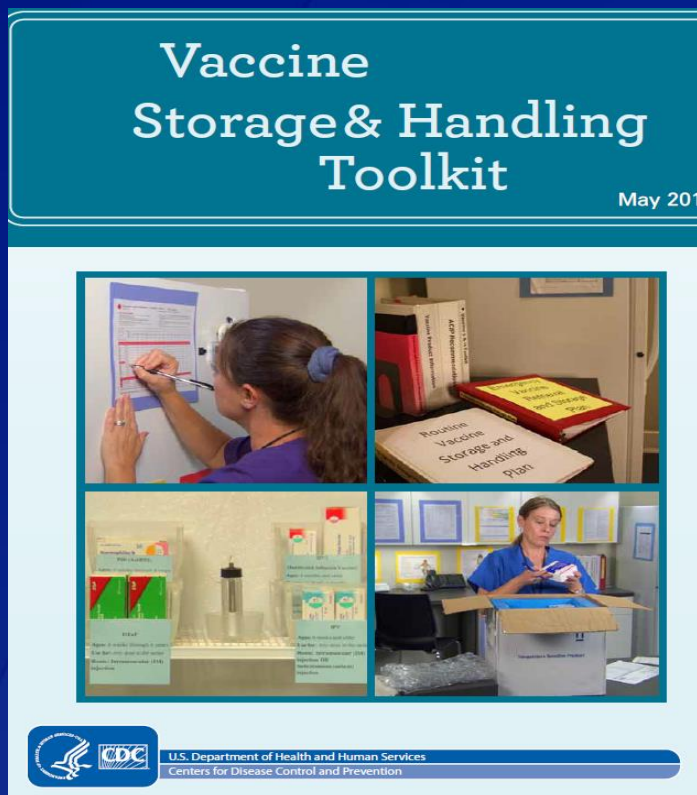
The screenshot shows the CDC Vaccines & Immunizations website. The header includes navigation links like 'CDC Home', 'About CDC', 'Press Room', 'A-Z Index', and 'Contact Us'. The main title is 'Vaccines & Immunizations' with a sub-header 'Education & Training'. The left sidebar lists 'Vaccine-Related Topics' such as Immunization Schedules, Recommendations and Guidelines, Vaccines & Preventable Diseases, Basics and Common Questions, Vaccination Records, Vaccine Safety and Adverse Events, For Travelers, For Specific Groups of People, and Campaign Materials. It also lists 'Additional Resources' like Publications, News and Media Resources, Calendars and Events, Education and Training, Immunization Courses, NetConferences, On-Site Training, Podcasts, Patient Education, Programs and Tools, Statistics and Surveillance, Partners' & Related Sites, and About NCIHQ. The main content area is titled 'Education & Training' and 'For Health Professionals'. It features a section 'On This Page' with links to 'Immunization Courses' (including broadcasts, webcasts, and self study), 'Epidemiology & Prevention of Vaccine-Preventable Diseases course', 'NetConferences', 'Curriculum Brochure', 'On-Site Training' (courses conducted by CDC Trainers), and 'Podcasts'. A link to 'See also: Patient Education Resources' is also present. Below this, there are two featured sections: 'Immunization Courses' with a photo of people in a meeting and text describing various formats (broadcasts, webcasts, DVD, CD ROM, web-based) and a 'Webcast calendar lists scheduled courses'; and 'Epidemiology & Prevention of Vaccine-Preventable Diseases Course' with a photo of a person at a computer and text describing a comprehensive overview of vaccination principles. The right sidebar includes links for 'Email this page', 'Printer-friendly version', 'Help', 'Glossary / Acronyms', 'Site Map', 'Quick Links', 'Related Pages' (Curriculum Brochure, everything about Education and Training in 2 pages), and 'Patient education'. At the bottom right, there is a 'CDC MatScape' section with a video thumbnail and text about a CDC Commentary on vaccine administration errors.

You Call the Shots: Influenza Vaccine

For Travelers	<h2>At a Glance</h2> <p>This product was developed through the Project to Enhance Immunization Content in Nursing Education and Training, which is supported by funding from the National Center for Immunization and Respiratory Diseases (NCIRD) of the Centers for Disease Control and Prevention (CDC), through a Cooperative Agreement with the Association for Prevention Teaching and Research.</p>  <h3>Need Continuing Education or a Certificate of Participation?</h3> <p>After viewing the modules, participants can go to CDC's online learning system to register for and obtain CE credit. General instructions are available in the CE How-to Guide.</p> <h3>Now Available</h3> <ul style="list-style-type: none">• Diphtheria, Tetanus, and Pertussis (DTaP) SEP 2015• <i>Haemophilus influenzae</i> type b (Hib) Jul 2015• Hepatitis A Jun 2015• Human Papillomavirus Jul 2015• Influenza SEP 2015 Scroll to bottom of page and click "continue" to start program• MMR Jan 2015 Scroll to bottom of page and click "continue" to start program• Polio OCT 2015• Understanding the Basics: General Recommendations on Immunization Feb 2015• Vaccines For Children (VFC)-2015 Jan 2015 Scroll to bottom of page and click "continue" to start program• Vaccine Storage and Handling-2015 Jan 2015 Scroll to bottom of page and click "continue" to start program
For Specific Groups of People	
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1600 Clifton Rd
Atlanta, GA 30333
 800-CDC-INFO 
(800-232-4636) 
TTY:
(888) 232-6348 
[Contact CDC-INFO](#)

Vaccine Storage and Handling Resources



CDC Storage and Handling Toolkit

www.cdc.gov/vaccines/recs/storage/toolkit/storage-handling-toolkit.pdf

You Call the Shots

www.cdc.gov/vaccines/ed/youcalltheshots.htm

Vaccine Administration Resources

CDC Home
Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People.™

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Injection Safety

Injection Safety
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CDC Statement
Information for Providers
Information for Patients
Preventing Unsafe Injection Practices
► **Safe Injection Practices**
CDC Clinical Reminder: Spinal Injection Procedures
Infection Prevention during Blood Glucose Monitoring and Insulin Administration
Recent Publications
Recent Meetings
The One & Only Campaign

Injection Safety > Preventing Unsafe Injection Practices

Recommend 7 Tweet Share

Safe Injection Practices to Prevent Transmission of Infections to Patients

Download the complete [2007 Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Healthcare Settings](#) (PDF - 3.80 MB)

III.A.1.b. Safe Injection Practices The investigation of four large outbreaks of HBV and HCV among patients in ambulatory care facilities in the United States identified a need to define and reinforce safe injection practices 453. The four outbreaks occurred in a private medical practice, a pain clinic, an endoscopy clinic, and a hematology/oncology clinic. The primary breaches in infection control practice that contributed to these outbreaks were 1) reinsertion of used needles into a multiple-dose vial or solution container (e.g., saline bag) and 2) use of a single needle/syringe to administer intravenous medication to multiple patients. In one of these outbreaks, preparation of medications in the same workspace where used needle/syringes were dismantled also may have been a contributing factor. These and other outbreaks of viral hepatitis could have been prevented by adherence to basic principles of aseptic technique for the preparation and administration of parenteral medications 453, 454. These include the use of a sterile, single-use, disposable needle and syringe for each injection given and prevention of contamination of injection equipment and medication.

Whenever possible, use of single-dose vials is preferred over multiple-dose vials, especially when medications will be administered to multiple patients. Outbreaks related to unsafe injection practices

Contact Us:
Centers for Disease Control and Prevention
1600 Clifton Rd
Atlanta, GA 30333
800-CDC-INFO
(800) 232-4636
TTY: (888) 232-6348
[Contact CDC-INFO](#)



Injection Safety

www.cdc.gov/injectionsafety/IP07_standardPrecaution.html

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Vaccine Administration

Recommendations and Guidelines

Guidelines

- Vaccine Administration Guidelines (2 MB, 15 pages) from Pink Book Appendix (includes pictures of sites)
- Vaccines with Diluents: How to Use Them (1 page) Contains a chart that lists the vaccines that require reconstitution with a diluent before they can be administered including maximum time allowed between reconstituting each vaccine and having to discard it. Plus the general steps to follow when reconstituting vaccines.
- It's Federal Law - use of VISs and more in Pink Book appendix E (1 MB, 10 pages) Appendix includes instructions for use of Vaccine Information Statements, how to get VISs, questions and answers, etc.
- Dosage, Route, Site:
 - All ages: Dose, Route, Site, and Needle Size (1 page)
 - Adults: Dose, Route, Site, Needle Size, and Preparation (1 page)
 - Adults: How to administer IM and SC Injections to Adults (1 page)
- Immunization Site Maps
 - Children
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 - Under 12 months of age (1 page)
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 - Pretens and Adolescents (1 page)
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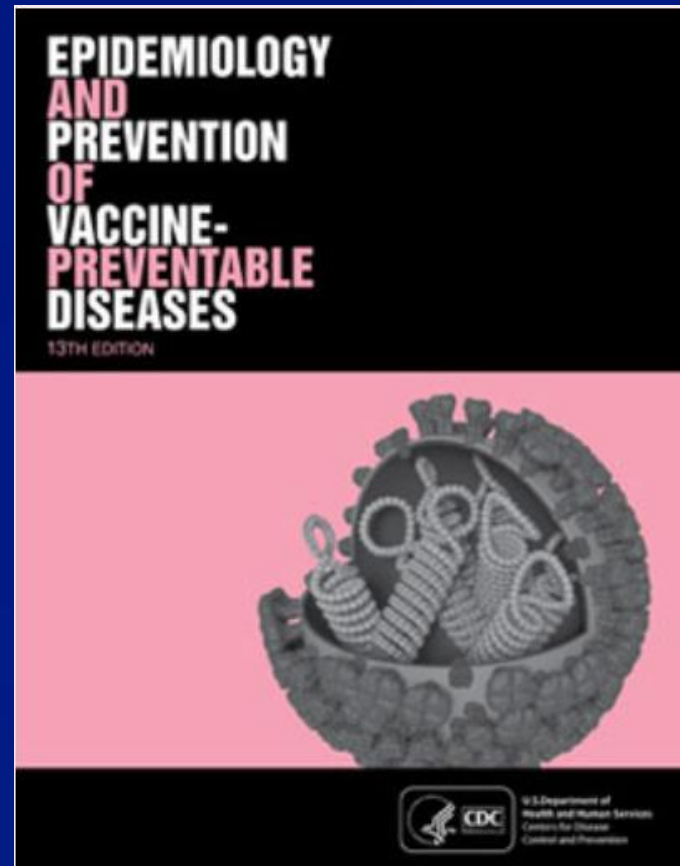
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Vaccine Administration

www.cdc.gov/vaccines/recs/vac-admin/default.htm

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- ❑ 13th Edition (2015)
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- ❑ Bound copies available for purchase.



www.cdc.gov/vaccines/pubs/pinkbook/index.html
www.cdc.gov/vaccines/ed/webinar-epv/index.html

CDC Vaccines and Immunization Resources

❑ Questions? E-mail CDC:

- CDC-INFO wwwn.cdc.gov/dcs/ContactUs/Form
- NIP-INFO nipinfo@cdc.gov

❑ CDC websites

- Vaccines www.cdc.gov/vaccines
- Health care providers www.cdc.gov/vaccines/hcp
- Safety www.cdc.gov/vaccinesafety
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