Washington State Department of Health

ADDRESSING VACCINE ADMINISTRATION ERRORS WEBINAR

April 27, 2022

Before We Start…

- All participants will be muted for the presentation.
- You may ask questions using the Q&A box, and questions will be answered at the end of the presentation.
- Continuing education is available for nurses, medical assistants, pharmacists, and pharmacy technicians attending the webinar or watching the recording. If you're watching in a group setting and wish to claim CE credit, please make sure you register for the webinar and complete the evaluation as an individual.
- You can find more information on our webinar webpage.

Presenter

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Continuing Education

- This continuing nursing education activity was approved by the Montana Nurses Association, an accredited approver with distinction by the American Nurses Credentialing Center's Commission on Accreditation. Upon successful completion of this activity, 1.0 contact hours will be awarded.
- This program has been granted prior approval by the American Association of Medical Assistants (AAMA) for 1.0 administrative continuing education unit.
- This knowledge-based activity was approved by the Washington State Pharmacy Association for 1.0 contact hours. The Washington State Pharmacy Association is accredited by the Accreditation Council for Pharmacy Education as a Provider of continuing pharmacy education.

Disclosures

The planners and speakers of this activity have no relevant financial relationships with any commercial interests pertaining to this activity.

Information about obtaining CEs will be available at the end of this webinar.

Vaccine Administration Errors

Washington Department of Health

April 27, 2022

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Disclosures

- **Sarah Schillie is a federal government employee with no financial interest in or conflict with the manufacturer of any product named in this presentation**

- **The findings and conclusions in this presentation are those of the presenter and do not necessarily reflect the official position of CDC/ATSDR**

- **COVID-19 vaccines are currently approved under a Biologics License Application (BLA) or authorized under an Emergency Use Authorization (EUA) by the U.S. Food and Drug Administration (FDA)**
  - As such, some discussion of off-label use may occur

Objectives

- 1. Identify common vaccine administration errors and strategies to prevent these errors.
- 2. Describe ways to address vaccine administration errors.
- 3. Describe relevant resources to prevent administration errors.

What is a Vaccine Administration Error?

- **Any preventable event that may cause or lead to inappropriate use or patient harm**
- **Such events may be related to:**
  - Professional practice
  - Immunization products (vials, needles, syringes)
  - Storage
  - Dispensing
  - Administration

Vaccine Administration Errors May Impact Safety and Efficacy

- **Safety**
  - Administration to someone younger than the authorized age
  - Shoulder Injury Related to Vaccine Administration (SIRVA)
  - Incorrect dosage (too large)
- **Efficacy**
  - Inadvertent subcutaneous (SQ) administration of a vaccine intended for intramuscular (IM) administration
  - Incorrect diluent
  - Incorrect dosage (too small)

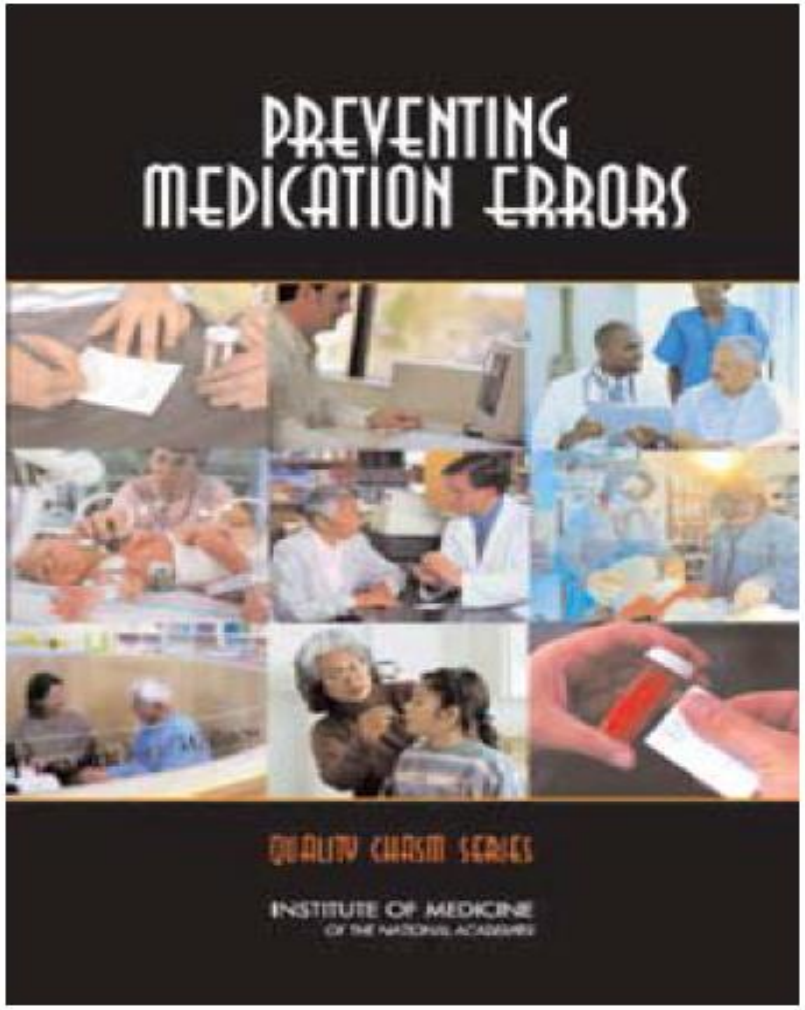
Poll Question

- **All of the following practices help to ensure safe medication administration EXCEPT:**

a. Use of protocols
b. Use of checklists
c. Relying on memory
d. Differentiating sound-alike products

Preventing Medication Errors

- **Institute of Medicine recommends implementing proven medication safety practices, including:**
  - Reducing reliance on memory
  - Standardization
  - Protocols and checklists
  - Differentiating look-alike and sound-alike products
  - Monitoring error frequencies and correcting system problems associated with errors



Literature Reports of Vaccine Administration Errors

Vaccine Administration Error: Examples

- **During a worksite occupational flu vaccination clinic, 67 persons were vaccinated:**
  - With improperly stored vaccine
  - Using the same syringe
  - Using an incorrect dosage

Morbidity and Mortality Weekly Report (*MMWR*)

Notes from the Field: Injection Safety and Vaccine Administration Errors at an Employee Influenza Vaccination Clinic – New Jersey, 2015

Weekly
December 18, 2015 / 64(49);1363-4

Laura Taylor, PhD[1]; Rebecca Greeley, MPH[1]; Jill Dinitz-Sklar, MPH[1]; Nicole Mazur, MPH[1]; Jill Swanson, MPH[2]; JoEllen Wolicki, BSN[3]; Joseph Perz, DrPH[4]; Christina Tan, MD[1]; Barbara Montana, MD[1]

On September 30, 2015, the New Jersey Department of Health (NJDOH) was notified by an out-of-state health services company that an experienced nurse had reused syringes for multiple persons earlier that day. This occurred at an employee influenza vaccination clinic on the premises of a New Jersey business that had contracted with the health services company to provide influenza vaccinations to its employees. The employees were to receive vaccine from manufacturer-prefilled, single-dose syringes. However, the nurse contracted by the health services company brought three multiple-dose vials of vaccine that were intended for another event. The nurse reported using two syringes she found among her supplies to administer vaccine to 67 employees of the New Jersey business. She reported wiping the syringes with alcohol and using a new needle for each of the 67 persons. One of the vaccine recipients witnessed and questioned the syringe reuse, and brought it to the attention of managers at the business who, in turn, reported the practice to the health services company contracted to provide the influenza vaccinations.

Reuse of syringes for multiple patients, with or without reuse of needles, is recognized as a serious infection control breach that poses risks for bloodborne pathogen transmission (*1*–*2*). Upon investigation additional concerns regarding vaccine administration and storage and handling were identified for this event. The nurse used only two multiple dose vials of vaccine (10 doses/vial) to administer vaccines to 67 adult participants; thus, participants did not receive the recommended dose of influenza vaccine. The health services company had shipped the vaccine to the nurse's home, where it was stored in her home refrigerator without temperature monitoring until the event. Vaccine doses were then transported from the nurse's home to the vaccination site using a styrofoam container and cold packs. After the event, unused vaccine doses were transported back to the nurse's home and stored in her refrigerator before being shipped back to the health services company in a container with cold packs.

In response to these injection safety and vaccine administration errors, the NJDOH, in consultation with CDC, recommended notification and testing of the New Jersey business employees who participated in the vaccination clinic for human immunodeficiency virus (HIV), hepatitis C virus, and hepatitis B virus. Postexposure prophylaxis with hepatitis B vaccine and readministration of influenza vaccination were also recommended. NJDOH sent an e-mail on October 2, informing the participants of the potential bloodborne pathogen exposures and recommendations for testing and vaccination. Certified follow-up letters also were sent. A dedicated NJDOH phone number and e-mail address were created to assist the affected patients. The West Windsor Health Department collaborated with an urgent care center to perform blood draws and administer the vaccines on October 5 and 6; HIV and mental health counselors were available on-site. NJDOH also provided letters for participants to bring to their private physicians outlining the situation, risk assessment, and public health recommendations. Forty-seven of 67 participants received services through the urgent care center and the West Windsor Health Department; an unknown number of participants received treatment from their private health care providers. Follow-up clinics were arranged at 1 month and at 4 months for hepatitis B vaccination and testing.

Recommendations for appropriate injection safety and vaccine storage, handling, and administration were not followed at the influenza vaccination clinic (*1*–*6*). Response to this event required rapid and extensive communication and coordination among public health partners, including CDC, NJDOH, the New Jersey State Board of Nursing, and the West Windsor Health Department, as well as private entities. The contracted nurse voluntarily surrendered her license within 1 week of the initial report.

MMWR 2015;64(49):1363-4. www.cdc.gov/mmwr/preview/mmwrhtml/mm6449a3.htm

Vaccine Administration Error: Examples

- **Menveo (MCV4; GSK) must be be reconstituted prior to administration**
  - Lyophilized component: MenA
  - Diluent: MenCWY
- **Administration error: Administering diluent alone**

MMWR 2015;65(6):161–162 https://www.cdc.gov/mmwr/volumes/65/wr/mm6506a4.htm

Vaccine Administration Error: Examples

- **39 reports of injecting rotavirus vaccines**
  - 33 for RV1 and 6 for RV5
  - This included a cluster of 6 reports involving RV1 by a nurse who did not receive proper training or read the package insert
- **19 (49%) documented an adverse event**

Morbidity and Mortality Weekly Report (*MMWR*)

Rotavirus Vaccine Administration Errors — United States, 2006–2013

Beth F. Hibbs, MPH[1], Elaine R. Miller, MPH[1], Tom Shimabukuro, MD[1] (Author affiliations at end of text)

Two live rotavirus oral vaccines, RotaTeq (RV5) (Merck & Co., Inc.) and Rotarix (RV1) (GlaxoSmithKline Biologicals) (Figure), are approved for prevention of rotavirus gastroenteritis (*1*) and recommended at ages 2, 4 (RV5/RV1), and 6 (RV5) months by the Advisory Committee on Immunization Practices. Because most childhood vaccines are injectable, vaccination providers might have less experience administering oral vaccines. To assess that hypothesis, CDC searched for reports to the Vaccine Adverse Event Reporting System (VAERS) (*2*) of rotavirus vaccine administration errors involving injection and eye splashes in the United States during the period January 1, 2006–August 1, 2013. A total of 66 reports were found.

There were 39 reports of administration by injection (33 for RV1 and six for RV5). This included a cluster of six reports involving RV1 by a nurse who did not receive proper training or read the package insert. Nineteen of the 39 reports (49%) documented an adverse event; irritability (seven cases) and injection site redness (five) were the most commonly reported adverse events. Thirty of 39 reports (77%) did not have an

FIGURE. Two live rotavirus oral vaccines (RotaTeq and Rotarix)*

Photos/Merck & Co., Inc. (RotaTeq) and GlaxoSmithKline Biologicals (Rotarix)

* During the period January 1, 2006–August 1, 2013, a total of 66 reports of

MMWR. 2014;63:81 https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6304a4.htm

Vaccine Administration Error: Examples

- Unintentional administration of insulin instead of influenza vaccine

Drugs Ther Perspect
DOI 10.1007/s40267-016-0333-2

SHORT COMMUNICATION

Unintentional administration of insulin instead of influenza vaccine: a case study and review of reports to US vaccine and drug safety monitoring systems

Jocelyn Clogston[1] · Lana Hudanick[2] · Tiffany A. Suragh[3] · Chris Jankosky[4] · Paige Lewis[3] · David Martin[5] · Christopher Schembri[3] · Craig Zinderman[4] · Yelena Maslov[6] · Mishale Mistry[6] · Jennifer R. Pippins[7] · Sarah Vee[6] · Jo Wyeth[6] · Tom T. Shimabukuro[3] · Jenelle Leighton[1]

Abstract

Introduction There have been isolated case reports of medication product mix-ups involving insulin unintentionally given to patients when the intent was to administer vaccines. Information on how and why these types of errors occur is limited.

Objective To describe incidents of unintentional administration of insulin instead of influenza vaccine and identify possible causes for errors.

searched Centers for Disease Control and Prevention (CDC) and US Food and Drug Administration (FDA) vaccine and drug safety monitoring databases from January 2005 to April 2015 in order to identify other incidents. We classified cases as either 'highly suggestive' or 'suggestive' of insulin and influenza vaccine mix-ups.

Results Investigation of the primary cluster incident revealed deviations from recommended practices for storage, handling, preparation, and administration of drugs and

Clogston et al. Unintentional administration of insulin instead of influenza vaccine: a case study and review of reports to US vaccine and drug safety monitoring systems. *Drugs & Therapy Perspectives*. 2016;32:439-446.

NIP-INFO Inquiries Regarding Vaccine Administration Errors

Vaccine Administration Error: Example from NIP-INFO

- An infant was born to a mother who is hepatitis B positive. The infant received the Hepatitis B vaccine and HBIG simultaneously but administered at the same anatomic injection site.

Vaccine Administration Error: Example from NIP-INFO

- Vaccines (Pediarix, Kinrix, Havrix, PCV13, HPV) were stored at too cold temperatures. Vaccine manufacturers advised that the vaccine is no longer viable.

Vaccine Administration Error: Example from NIP-INFO

- We use Hiberix in our office and it comes with its own diluent. Yesterday, we used a different diluent (from another vaccine) for Hiberix.

Vaccine Administration Error: Example from NIP-INFO

- An 11-year old patient received a dose of Meningococcal B rather than Meningococcal ACWY. What is the recommendation on completion of the MenB series? Do we wait until they are 16 years old?

Vaccine Administration Error: Example from NIP-INFO

- I have a question about any precautions needed if a third dose of Rotateq was mistakenly given only 2 weeks after the second dose.

Vaccine Administration Error: Example from NIP-INFO

- I have a 12-month old patient who was inadvertently given HPV (instead of Hep A) as a nursing error.

Vaccine Administration Error: Example from NIP-INFO

- A 6-month old patient was given Hib vaccine (PedvaxHiB) in error. How do we proceed? Do we just ignore the dose? Does the child still get the booster at 12-15 months of age?

COVID-19 Vaccine Administration Errors

COVID-19 Vaccine Administration Errors

- **Analysis of COVID-19 vaccine administration error inquiries at the onset of vaccine roll-out**
  - December 14, 2020, to February 28, 2021
  - Inquiries received by CDC (e.g., CDC-INFO, NIP-INFO)

- **324 inquiries**
  - Some inquiries represent errors affecting more than one vaccine recipient (e.g., at a mass vaccination clinic).
  - Inquiries likely under-estimate the actual number of vaccine administration errors

Common COVID Vaccine Administration Errors to Watch For (medscape.com)

Error Type	Example	n(%)*
Administration by the incorrect route	Subcutaneous administration	40 (12.3%)
Administration at an incorrect anatomic site	Administration into shoulder bursa; administration in the gluteal muscle of the buttock	33 (10.2%)
Higher-than-authorized dose volume administered	Administration of undiluted vaccine	11 (3.4%)
Lower-than-authorized dose volume administered	Dose leaked out of syringe; recipient pulled away and dose leaked out	114 (35.2%)
Administration to someone younger than the authorized age	Administration to person aged < 16 years (Pfizer-BioNTech) or < 18 years (Moderna)	60 (18.5%)
Administration of a mixed-product series	First and second doses from different manufacturer	16 (4.9%)
Administration of a second dose earlier than the 4-day grace period	Second dose administered < 17 days (Pfizer-BioNTech) or < 24 days (Moderna) after the first dose	21 (6.5%)
Dose administered after improper storage and handling	Temperature excursion; more than allowed time after first vial puncture; use after beyond use date	15 (4.6%)
Other	Incorrect diluent; incorrect needle length; expired syringe	14 (4.3%)

*Some inquiries represent errors affecting more than one vaccine recipient (e.g., at a mass vaccination clinic).

COVID-19 Vaccine Administration Errors

- **For some COVID-19 vaccine administration errors, CDC does not recommend repeating the dose, such as:**
  - Dose administered at incorrect site
  - Dose administered by incorrect route
  - Vaccine administered after the recommended interval
  - Higher-than-authorized dose volume administered

Common COVID Vaccine Administration Errors to Watch For (medscape.com)

COVID-19 Vaccine Administration Errors

- **Repeating the dose (as soon as possible, in the opposite arm) is recommended for some errors, including:**
  - Lower-than-authorized dose volume administered
  - Vaccine mixed with too much diluent
  - Errors in which only diluent was administered

Common COVID Vaccine Administration Errors to Watch For (medscape.com)

COVID-19 Vaccine Administration Errors

- **Errors related to improper storage and handling or use of an incorrect diluent**
  - Contact the manufacturer for information on the stability of the vaccine

Common COVID Vaccine Administration Errors to Watch For (medscape.com)

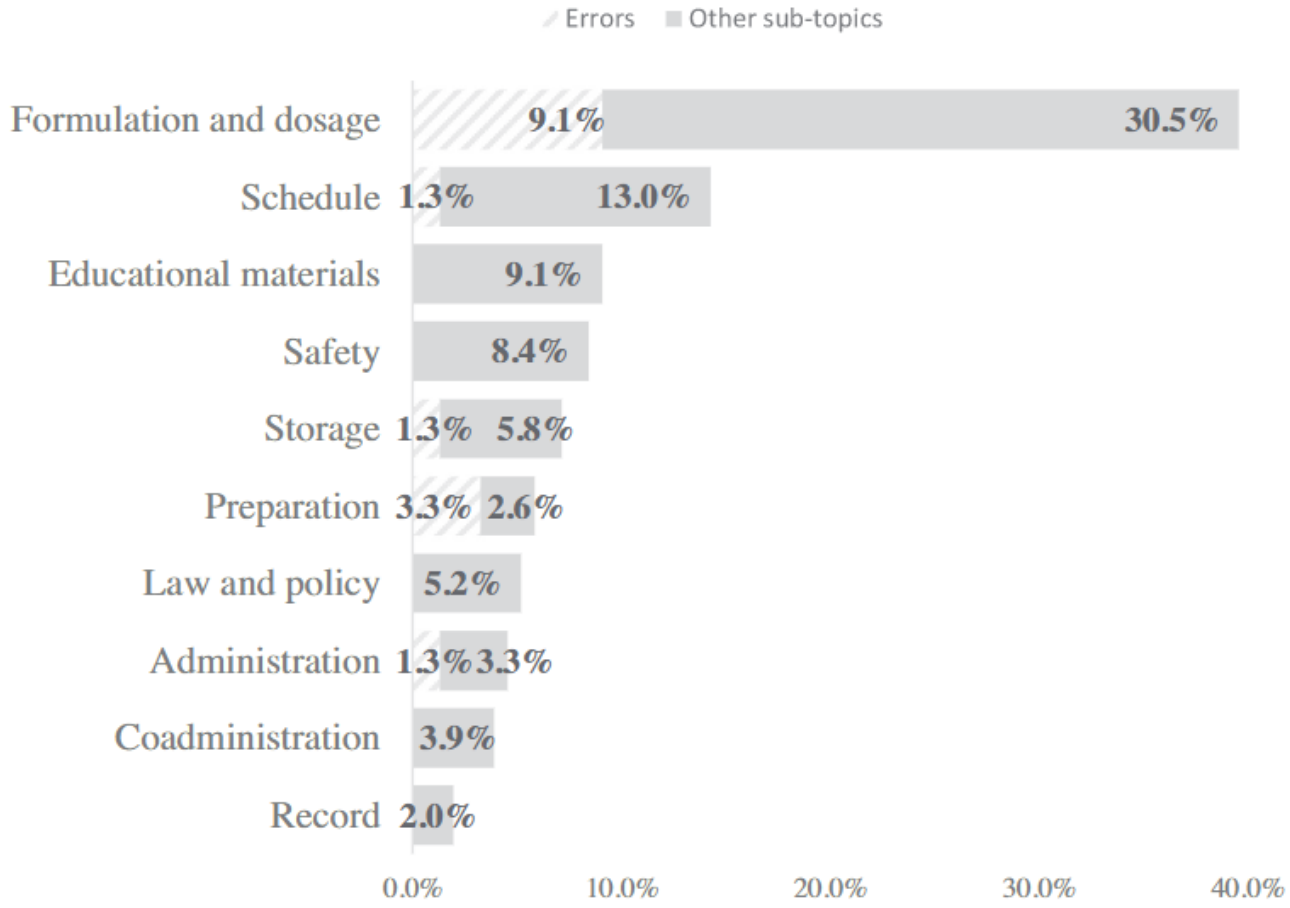
Errors Impacting Vaccine Efficacy

- **Although data for mRNA COVID-19 vaccines are lacking, IM vaccine administration in general (compared with subcutaneous administration) optimizes immunogenicity and minimizes local adverse reactions.**
  - Subcutaneous fat has poor vascularity, leading to slow mobilization and antigen processing for some other vaccines administered subcutaneously.
- **When some vaccines (i.e., hepatitis B, human papillomavirus, or influenza vaccines) are inadvertently administered subcutaneously, readministration by the IM route is recommended.**
  - Readministration by the IM route is not recommended for COVID-19 vaccines inadvertently administered subcutaneously
- **It is not necessary to readminister vaccine doses intended for subcutaneous administration (e.g., MMR or varicella vaccines) that were inadvertently administered by the IM route because immune response is unlikely to be affected**

Errors Affecting Safety

- **Data are limited regarding the safety implications of some COVID-19 vaccine administration errors, e.g.:**
  - Administration to someone younger than the authorized age
  - Administration of a second dose earlier than the 4-day grace period
- **Shoulder injury related to vaccine administration (SIRVA) is a recognized consequence of unintentional injection of a vaccine into the tissues and structures lying underneath the deltoid muscle of the shoulder.**
  - It is an injury to the musculoskeletal structures of the shoulder, including ligaments, bursa, and tendons. SIRVA is thought to occur from unintended injection of vaccine or trauma from the needle into or around the underlying bursa of the shoulder.

COVID-19 Vaccine Inquiries Regarding Children Age 5-11 Years Received by NIP-INFO



16.2% related to vaccine administration error

Hall E., et al. Publ Hlth Nurs 2022 Apr 12

Interim Recommendations for COVID-19 Vaccine Administration Errors and Deviations

Table C. Interim recommendations for COVID-19 vaccine administration errors and deviations

Type	Administration error/deviation	Interim recommendation
Site/route	• Incorrect site (i.e., site other than the deltoid muscle or anterolateral thigh)	• Do not repeat dose.
	• Incorrect route (e.g., subcutaneous)	• Do not repeat dose. • Inform the recipient of the potential for local and systemic adverse events.
Age	• Unauthorized age group (recipients ages 5 years and younger)	• Do not give another dose at this time.*

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-c

Interim Recommendations for COVID-19 Vaccine Administration Errors and Deviations

		adverse events.
Age	• Unauthorized age group (recipients ages 5 years and younger)	• Do not give another dose at this time.*

	• Unauthorized age group (recipients ages 5 –11 years)	• If Moderna vaccine administered:
		  • As the first dose, administer a single dose of the age-appropriate Pfizer-BioNTech vaccine at least 28 days after the Moderna vaccine dose.
		  • As the second dose, or as both the first and second dose, the primary series is complete.
		• If Janssen vaccine administered:
		  • Because the efficacy of this vaccine in this age group has not been established, administer a single dose of the age-appropriate Pfizer-BioNTech vaccine at least 28 days after the Janssen vaccine.

	• Unauthorized age group (recipients ages 12 –17 years)	• If Moderna vaccine administered:
		  • As the first dose, administer the age-appropriate Pfizer-BioNTech vaccine as the second dose at least 28 days after the Moderna vaccine dose. Administer a Pfizer-BioNTech booster dose at least 5 months later.
		  • As the second dose, or as both the first and second dose, the primary series is complete. Administer a Pfizer-BioNTech booster dose at least 5 months later.
		  • As a booster dose, no more doses are indicated. The recipient is up to date.
		• If Janssen vaccine administered
		  • Because the efficacy of this vaccine in this age group has not been established, administer a single dose of the age-appropriate Pfizer-BioNTech vaccine formulation at least 28 days after the Janssen vaccine. Administer a Pfizer-BioNTech booster dose at least 5 months later.

[illegible]	[illegible] vaccine ≥12 years formulation (purple or gray	[illegible] based on clinical judgement (e.g., child received 2 doses of

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-c

Interim Recommendations for COVID-19 Vaccine Administration Errors and Deviations

Formulation and dosage	• If ages 5–11 years and Pfizer-BioNTech vaccine ≥12 years formulation (purple or gray cap) inadvertently administered	• If 0.1 mL administered, in general, do **not** repeat dose. However, based on clinical judgement (e.g., child received 2 doses of incorrect formulation), a repeat dose of Pfizer-BioNTech vaccine 5–11 years formulation (orange cap) may be administered at an interval of ≥21 days after the dose given in error.[§] • If >0.1 mL administered, resulting in a higher-than-authorized dose, do **not** repeat dose.[†]
	• If ages 12–17 years and administered the Pfizer-BioNTech vaccine 5–11 years formulation (orange cap), resulting in a lower-than-authorized dose[‡]	• In general, do **not** repeat dose. However, based on clinical judgement (e.g., the adolescent received 2 doses of incorrect formulation), a repeat dose of Pfizer-BioNTech vaccine ≥12 years formulation (30 µg, purple cap) may be administered at an interval of ≥21 days after the dose given in error.[§]
	• If ages ≥18 years and administered the Pfizer-BioNTech vaccine 5–11 years formulation (orange cap), resulting in a lower-than-authorized dose	• Repeat dose immediately (no minimum interval) with the age-appropriate dose and formulation.[§]
	• Higher-than-authorized dose volume administered of the correct formulation	• Do not repeat dose.[†]
	• Lower-than-authorized dose volume administered of the correct formulation (e.g., leaked out, equipment failure, recipient pulled away)	• Repeat dose immediately (no minimum interval).[§] • However, if a half-volume formulation of vaccine is administered to a patient recommended for the full volume formulation, another half-volume dose can be administered on the same clinic day, and the two doses can count as one full dose.
Storage and handling	• Dose administered after improper storage and handling (i.e., temperature excursion)	• Contact the manufacturer for information on the stability of the vaccine. If the manufacturer does not have data to support the

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-c

Interim Recommendations for COVID-19 Vaccine Administration Errors and Deviations

Storage and handling	• Dose administered after improper storage and handling (i.e., temperature excursion)	• Contact the manufacturer for information on the stability of the vaccine. If the manufacturer does not have data to support the stability of the vaccine, repeat the dose immediately (no minimum interval).[5]
	• Dose administered past the expiration/beyond-use date	• Contact the manufacturer for information on the stability of the vaccine. If the manufacturer does not have data to support the stability of the vaccine, repeat the dose immediately (no minimum interval).[5]
Interval[4]	• An mRNA primary series dose administered	• Repeat dose. Space repeat dose after the dose given is spaced by

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-c

Interim Recommendations for COVID-19 Vaccine Administration Errors and Deviations

Intervals[¶]	• An mRNA primary series dose administered prior to the recommended interval[#]	• Repeat dose. Space repeat dose after the dose given in error by at least the minimum interval (i.e., no sooner than 21 days if Pfizer-BioNTech or 28 days of Moderna).[§]

	• Booster dose administered prior to the minimum interval (i.e., prior to 2 months after Janssen primary series or 3 months after mRNA vaccine primary series).	• Repeat dose if this is the first booster dose. Space repeat dose after the dose given in error by at least the minimum interval.[§]
		  ▪ 2-month minimum booster interval after Janssen vaccine primary series
		  ▪ 3-month minimum booster interval after mRNA vaccine primary series
		• Do not repeat dose if this is the second booster dose.

	• Any COVID-19 vaccine dose administered at any interval after the recommended interval	• Do not repeat dose. There is no maximum interval. • This deviation from CDC guidance does not require VAERS reporting.
	• Tixagevimab/cilgavimab (EVUSHELD™) administered less than 14 days after COVID-19 vaccination.	• In general, do not repeat dose. However, based on clinical judgement, a repeat dose of vaccine may be administered at an interval of at least 28 days after the dose of vaccine.[§]
Mixed series	• Incorrect mRNA COVID-19 vaccine product inadvertently administered as part of a 2- or 3-dose primary series	• Do not repeat dose.

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-c

Interim Recommendations for COVID-19 Vaccine Administration Errors and Deviations

Diluent (Pfizer-BioNTech COVID-19 Vaccine formulations only [purple cap and orange cap])	• ONLY diluent administered (i.e., sterile 0.9% sodium chloride)	• Administer the authorized dose immediately (no minimum interval).
	• No diluent, resulting in higher than authorized dose (i.e., 0.3 ml of undiluted vaccine administered)	• Do not repeat dose.† Inform the recipient of the potential for local and systemic adverse events.
	• Incorrect diluent type (e.g., sterile water, bacteriostatic 0.9% sodium chloride)	• Contact the manufacturer for information on the stability of the vaccine. If the manufacturer does not have information to support the stability of the vaccine, repeat the dose immediately (no minimum interval).§
	• Vaccine is mixed with too little diluent	• Do not repeat dose. Inform the recipient of the potential for local and systemic adverse events.†
	• Vaccine is mixed with too much diluent	• Repeat dose immediately (no minimum interval).§
	• Single-use vial of diluent is used to mix multiple vials of vaccine	• Do not repeat dose. Inform patient of the potential for bacterial infection.
Diluent (Pfizer-BioNTech COVID-19 formulation that should not be mixed with diluent, i.e., gray cap)	• Vaccine is mixed with any diluent (i.e., any type or volume of diluent)	• Contact the manufacturer for information on the stability of the vaccine. If the manufacturer does not have information to support the stability of the vaccine, repeat the dose immediately (no minimum interval).§

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-c

Interim Recommendations for COVID-19 Vaccine Administration Errors and Deviations

*Do not administer the second dose until the person becomes eligible to receive vaccination (either by reaching the authorized age or if the authorization is extended to include additional age groups), even if this results in the second dose being administered after the recommended interval between doses.

†If the administration error resulted in a higher-than-authorized vaccine dose, in general a subsequent dose may still be administered at the recommended interval. However, if local or systemic side effects following vaccination are clinically concerning (outside of the expected side effect profile), lead to serious adverse reactions, or are ongoing at the time of the subsequent dose, this dose might be delayed, but this decision should be assessed on a case-by-case basis.

‡People who will turn from age 11 years to 12 years between their first and second dose in the primary regimen may receive, either: (1) the Pfizer-BioNTech COVID-19 Vaccine formulation authorized for use in people ages 5 through 11 years (each 0.2 mL dose containing 10 µg) (orange cap); or (2) the Pfizer-BioNTech COVID-19 Vaccine formulation authorized for use in people ages 12 years and older (each 0.3 mL dose containing 30 µg) (purple or gray cap). This dosing is in accordance with the FDA EUA and if such dosing occurred, this is not considered an error and VAERS reporting is not indicated.

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-c

Interim Recommendations for COVID-19 Vaccine Administration Errors and Deviations

§Some experts suggest further delaying the repeat dose for 8 weeks after the invalid dose based on the potential for increased reactogenicity and the rare risk of myocarditis from mRNA COVID-19 vaccine, particularly in groups at increased risk for myocarditis (e.g., males ages 12–39 years). Individual risk for COVID-19 and the likelihood for an adverse event following vaccination should be taken into consideration when recommending a longer interval.

¶For the purpose of the public health definition of fully vaccinated, doses administered with an interval error prior to October 25, 2021 do not need to be repeated.

#Vaccine administered up to 4 days before the minimum interval may be counted and do not need to be repeated.

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-c

For All Vaccine Administration Errors:

- Inform the recipient of the vaccine administration error.

- Consult with the state immunization program and/or immunization information system (IIS) to determine how the dose should be entered into the IIS, both as an administered dose and to account for inventory.

- Report the error to the Vaccine Adverse Event Reporting System (VAERS), unless otherwise indicated in the table. Providers are required to report all COVID-19 vaccine administration errors—even those not associated with an adverse event—to VAERS. To file an electronic report, please see the VAERS websiteexternal icon.

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-c

For All Vaccine Administration Errors (cont.):

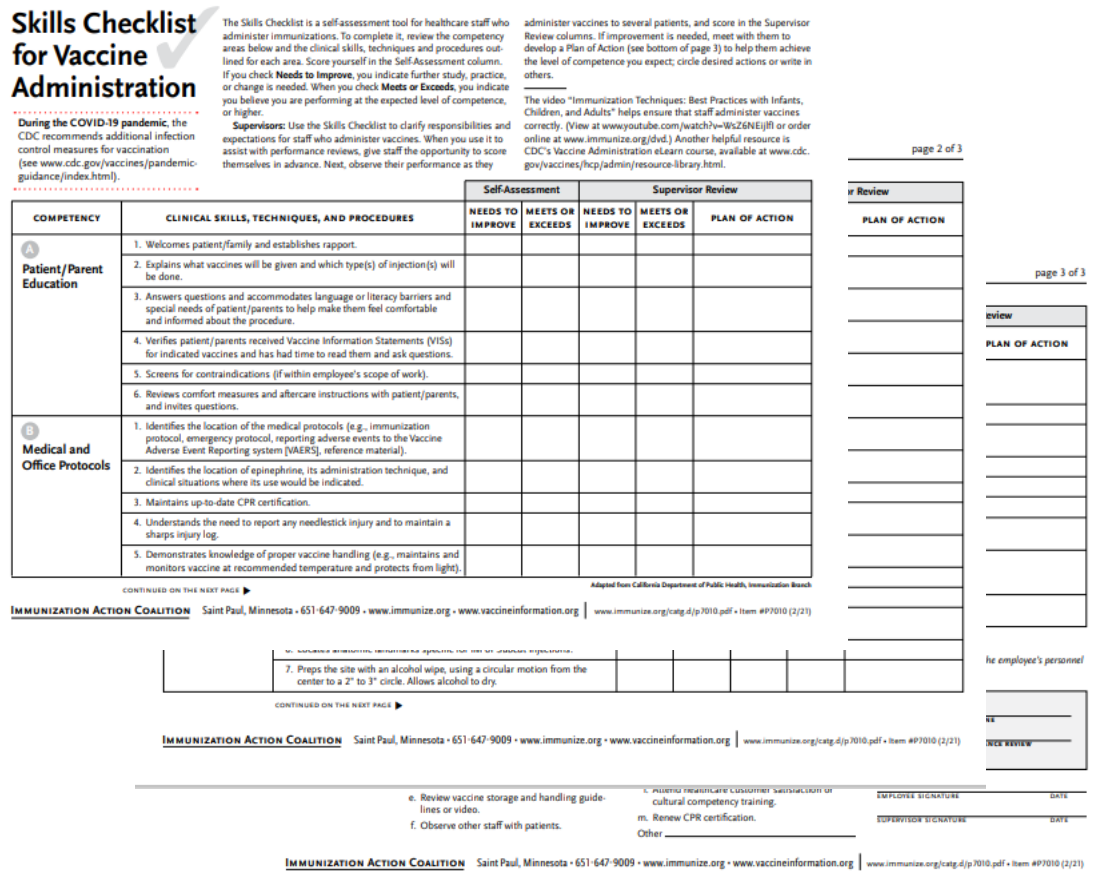
- Determine how the error occurred and implement strategies to prevent it from happening again. A discussion on strategies to prevent errors can be found in the "Vaccine Administration" chapter of *Epidemiology and Prevention of Vaccine-Preventable Diseases* (Pink Book). Additional resources can be found on CDC's vaccine administration web page, including a job aid for preventing errors.

https://www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#appendix-c

Best Practice Strategies and Resources

Strategies to Prevent Vaccination Errors: Knowledgeable Staff

- **Before administering vaccines, all personnel who will administer vaccines should:**
  - Receive competency-based training
  - Have knowledge and skills validated
- **Integrate competency-based training into:**
  - New staff orientation
  - Annual education requirements
- **Ongoing education:**
  - Whenever vaccine administration recommendations are updated
  - When new vaccines are added to inventory
- **Don't forget to assess vaccine administration skills of temporary staff**



Skills Checklist for Vaccine Administration

During the COVID-19 pandemic, the CDC recommends additional infection control measures for vaccination (see www.cdc.gov/vaccines/pandemic-guidance/index.html).

The Skills Checklist is a self-assessment tool for healthcare staff who administer immunizations. To complete it, review the competency areas below and the clinical skills, techniques and procedures outlined for each area. Score yourself in the Self-Assessment column. If you check **Needs 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 staff who administer vaccines. When you use it to assist with performance reviews, give staff the opportunity to score themselves in advance. Next, observe their performance as they administer vaccines to several patients, and score in the Supervisor Review columns. If improvement is needed, meet with them to develop a Plan of Action (see bottom of page 3) to help them achieve the level of competence you expect; circle desired actions or write in others.

The video "Immunization Techniques: Best Practices with Infants, Children, and Adults" helps ensure that staff administer vaccines correctly. (View at www.youtube.com/watch?v=WsZ6NEijJfI or order online at www.immunize.org/dvd.) Another helpful resource is CDC's Vaccine Administration eLearn course, available at www.cdc.gov/vaccines/hcp/admin/resource-library.html.

COMPETENCY	CLINICAL SKILLS, TECHNIQUES, AND PROCEDURES	Self-Assessment: NEEDS TO IMPROVE	Self-Assessment: MEETS OR EXCEEDS	Supervisor Review: NEEDS TO IMPROVE	Supervisor Review: MEETS OR EXCEEDS	Supervisor Review: PLAN OF ACTION
A Patient/Parent Education	1. Welcomes patient/family and establishes rapport.					
	2. Explains what vaccines will be given and which type(s) of injection(s) will be done.					
	3. Answers questions and accommodates language or literacy barriers and special needs of patient/parents to help make them feel comfortable and informed about the procedure.					
	4. Verifies patient/parents received Vaccine Information Statements (VISs) for indicated vaccines and has had time to read them and ask questions.					
	5. Screens for contraindications (if within employee's scope of work).					
	6. Reviews comfort measures and aftercare instructions with patient/parents, and invites questions.					
B Medical and Office Protocols	1. Identifies the location of the medical protocols (e.g., immunization protocol, emergency protocol, reporting adverse events to the Vaccine Adverse Event Reporting system [VAERS], reference material).					
	2. Identifies the location of epinephrine, its administration technique, and clinical situations where its use would be indicated.					
	3. Maintains up-to-date CPR certification.					
	4. Understands the need to report any needlestick injury and to maintain a sharps injury log.					
	5. Demonstrates knowledge of proper vaccine handling (e.g., maintains and monitors vaccine at recommended temperature and protects from light).					

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Adapted from California Department of Public Health, Immunization Branch

	7. Preps the site with an alcohol wipe, using a circular motion from the center to a 2" to 3" circle. Allows alcohol to dry.					

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e. Review vaccine storage and handling guidelines or video.
f. Observe other staff with patients.
m. Renew CPR certification.
Other _____

EMPLOYEE SIGNATURE DATE
SUPERVISOR SIGNATURE DATE

Immunization Action Coalition: Skills Checklist for Immunization

Infection Control

- **Perform hand hygiene:**
  - Before preparing and administering vaccines
  - Between patients
  - Anytime hands become soiled
- **Gloves are not required to be worn when administering injectable vaccines unless the person administering the vaccine is likely to come into contact with potentially infectious body fluids or has open lesions on hands:**
  - If gloves are worn, they should be changed between patients
  - Perform hand hygiene between patients even if wearing gloves
- **Healthcare personnel should wear gloves when administering intranasal or oral vaccines**

***MMWR* 2011;60(2):17**

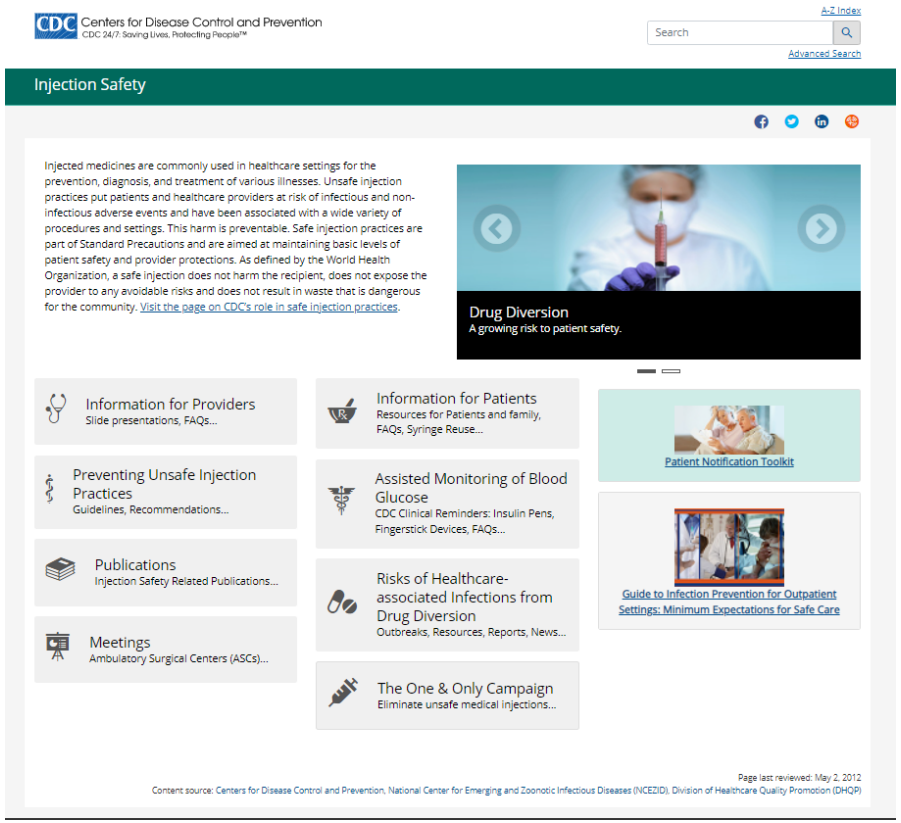
Routine and Influenza Immunization Services During the COVID-19 Pandemic: Interim Guidance | CDC

Infection Control, cont.

- **Maintain proper infection control practices while preparing and administering vaccines:**
  - Draw up and prepare vaccines in a clean medication preparation area
- **Equipment disposal:**
  - Puncture-proof biohazard container
  - Empty or expired vaccine vials are medical waste

Safe Injection Practices

- **To ensure vaccination is as safe and effective as possible, incorporate:**
  - Professional standards for medication administration
  - Manufacturer's vaccine-specific guidelines
  - Evidence-based safe medication administration practices, including proper injection practices
- **Prepare and administer vaccines using aseptic technique:**
  - Use a new needle and syringe for every injection
  - Disinfect the medication vial by rubbing the diaphragm with a sterile alcohol wipe
- **Use a single-dose vial for a single patient for a single procedure or injection:**
  - Discard after "entering" the vial, even if there is leftover vaccine



CDC Injection Safety www.cdc.gov/injectionsafety/

Strategies to Prevent Vaccination Errors: Schedule and Timing

- **Keep current reference materials available for staff, including:**
  - Recommended childhood and adult schedules
  - Minimum age and interval table (Table 3-2)
- **Educate staff administering vaccines about vaccines in the facility's inventory**
- **Assess for indicated vaccines using your state's Immunization Information System**

TABLE 3-2. Recommended and minimum ages and intervals between vaccine doses[a],[b],[c],[d]

Known as the "grace period", vaccine doses administered ≤4 days before the minimum interval or age are considered valid; however, local or state mandates might supersede this 4-day guideline

"3 calendar months" (or fewer) can be converted into weeks per the formula "1 month = 4 weeks"

Vaccine and dose number	Recommended age for this dose	Minimum age for this dose	Recommended interval to next dose	Minimum interval to next dose
DTaP-1[e]	2 months	6 weeks	8 weeks	4 weeks
DTaP-2	4 months	10 weeks	8 weeks	4 weeks
DTaP-3	6 months	14 weeks	6-12 months[f]	6 months[f]
DTaP-4	15-18 months	15 months[f]	3 years	6 months
DTaP-5[g]	4-6 years	4 years	—	—
HepA-1[e]	12-23 months	12 months	6-18 months	6 months
HepA-2	≥18 months	18 months	—	—
HepB-1[h]	Birth	Birth	4 weeks-4 months	4 weeks
HepB-2	1-2 months	4 weeks	8 weeks-17 months	8 weeks
HepB-3[i]	6-18 months	24 weeks	—	—
Hib-1[j]	2 months	6 weeks	8 weeks	4 weeks
Hib-2	4 months	10 weeks	8 weeks	4 weeks
Hib-3[k]	6 months	14 weeks	6-9 months	8 weeks
Hib-4	12-15 months	12 months	—	—
HPV Two Dose Series[l]				

ACIP General Recommendations on Immunization, Table 3-2 https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/downloads/general-recs.pdf

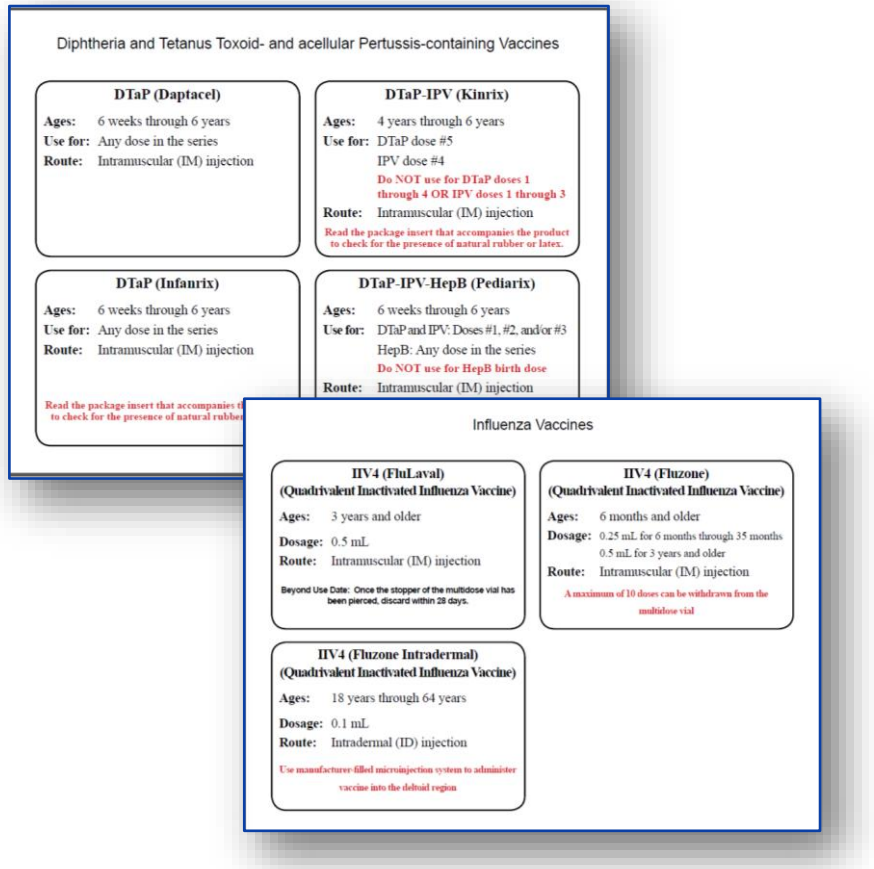
ACIP Immunization Schedules for Children and Adults www.cdc.gov/vaccines/schedules/

Immunization Information Systems www.cdc.gov/vaccines/programs/iis/index.html

Strategies to Prevent Vaccination Errors: Wrong Vaccine

- **Store some vaccines on separate shelves:**
  - Pediatric and adult formulations of the same vaccine
  - Sound-alike and look-alike vaccines

- **Label vaccines with type and age:**
  - Color coding labels can help

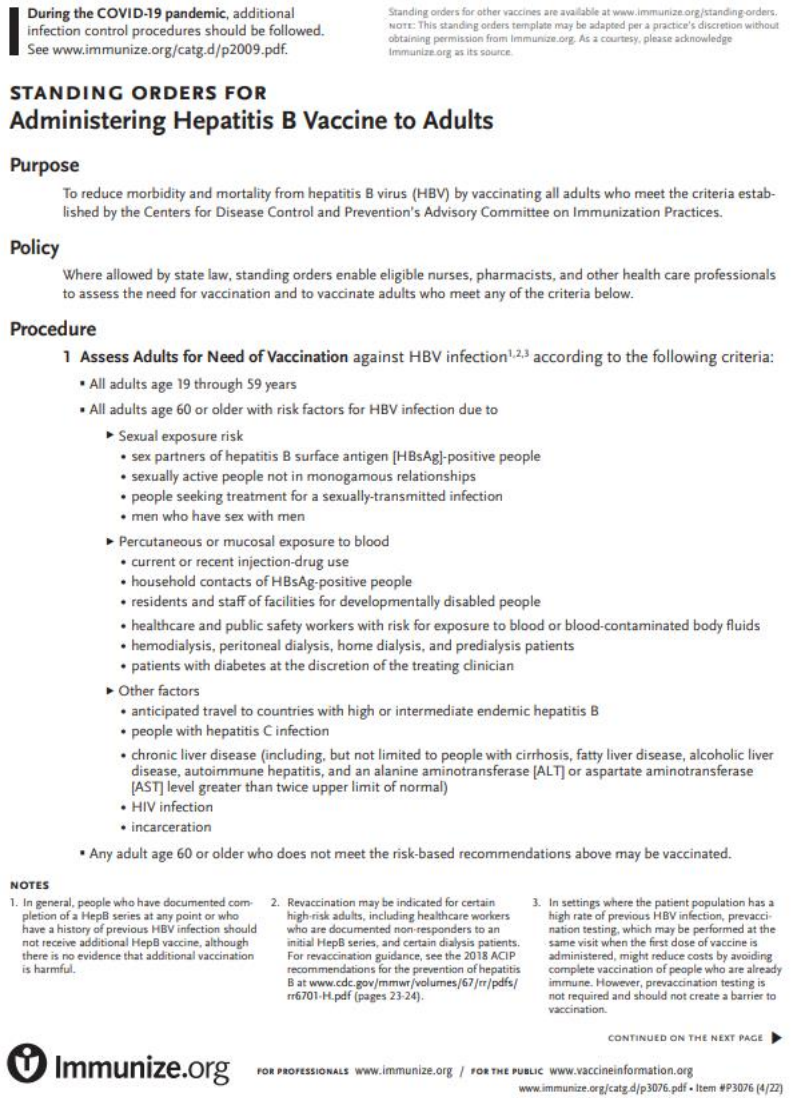


CDC vaccine labels

CDC vaccine label examples www.cdc.gov/vaccines/hcp/admin/storage/guide/vaccine-storage-labels.pdf

Strategies to Prevent Vaccination Errors: Wrong Vaccine

- **Only administer vaccines you have prepared and triple-checked**
- **Use standardized ACIP vaccine abbreviations**
- **Consider using standing orders, including:**
  - Who should be vaccinated
  - Indications, contraindications, and precautions
  - Procedures for administering the vaccine
  - Federal requirements (e.g., Vaccine Information Statement)
  - Documentation in the patient record
  - Protocol for the management of any medical emergency related to the administration of the vaccine
  - Reporting possible adverse events occurring after vaccination



During the COVID-19 pandemic, additional infection control procedures should be followed. See www.immunize.org/catg.d/p2009.pdf.

Standing orders for other vaccines are available at www.immunize.org/standing-orders. NOTE: This standing orders template may be adapted per a practice's discretion without obtaining permission from Immunize.org. As a courtesy, please acknowledge Immunize.org as its source.

STANDING ORDERS FOR
Administering Hepatitis B Vaccine to Adults

Purpose

To reduce morbidity and mortality from hepatitis B virus (HBV) by vaccinating all adults who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices.

Policy

Where allowed by state law, standing orders enable eligible nurses, pharmacists, and other health care professionals to assess the need for vaccination and to vaccinate adults who meet any of the criteria below.

Procedure

1 **Assess Adults for Need of Vaccination** against HBV infection[1,2,3] according to the following criteria:

- All adults age 19 through 59 years
- All adults age 60 or older with risk factors for HBV infection due to
  - Sexual exposure risk
    - sex partners of hepatitis B surface antigen [HBsAg]-positive people
    - sexually active people not in monogamous relationships
    - people seeking treatment for a sexually-transmitted infection
    - men who have sex with men
  - Percutaneous or mucosal exposure to blood
    - current or recent injection-drug use
    - household contacts of HBsAg-positive people
    - residents and staff of facilities for developmentally disabled people
    - healthcare and public safety workers with risk for exposure to blood or blood-contaminated body fluids
    - hemodialysis, peritoneal dialysis, home dialysis, and predialysis patients
    - patients with diabetes at the discretion of the treating clinician
  - Other factors
    - anticipated travel to countries with high or intermediate endemic hepatitis B
    - people with hepatitis C infection
    - chronic liver disease (including, but not limited to people with cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, and an alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice upper limit of normal)
    - HIV infection
    - incarceration
- Any adult age 60 or older who does not meet the risk-based recommendations above may be vaccinated.

NOTES

1. In general, people who have documented completion of a HepB series at any point or who have a history of previous HBV infection should not receive additional HepB vaccine, although there is no evidence that additional vaccination is harmful.
2. Revaccination may be indicated for certain high-risk adults, including healthcare workers who are documented non-responders to an initial HepB series, and certain dialysis patients. For revaccination guidance, see the 2018 ACIP recommendations for the prevention of hepatitis B at www.cdc.gov/mmwr/volumes/67/rr/pdfs/rr6701-H.pdf (pages 23-24).
3. In settings where the patient population has a high rate of previous HBV infection, prevaccination testing, which may be performed at the same visit when the first dose of vaccine is administered, might reduce costs by avoiding complete vaccination of people who are already immune. However, prevaccination testing is not required and should not create a barrier to vaccination.

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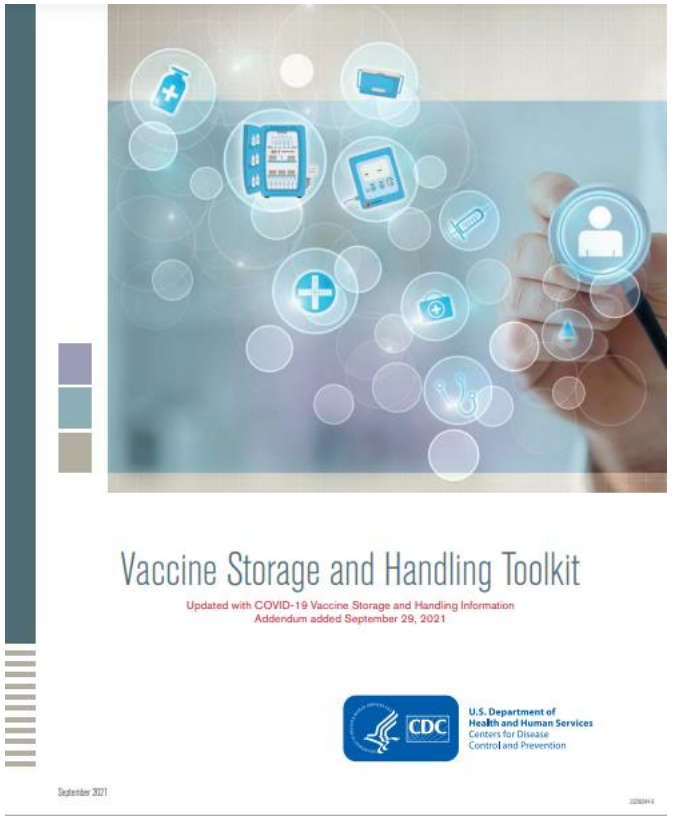
ACIP vaccine abbreviations www.cdc.gov/vaccines/acip/committee/guidance/vac-abbrev.html
Immunize.org: standing orders templates www.immunize.org/standing-orders/

Strategies to Prevent Vaccination Errors: Storage and Handling

- **Designate a primary vaccine coordinator for your facility**
  - Choose a second staff member to act as an alternate vaccine coordinator
- **Use a continuous temperature monitoring device (TMD)**
  - CDC recommends using digital data loggers
- **Check and record storage unit minimum and maximum temperatures at the start of each workday. If your TMD does not read min/max temperatures, then check and record the current temperature a minimum of 2 times per workday (at the start and end of the workday). Record:**
  - Minimum/maximum temperature
  - Date
  - Time
  - Name of person who checked and recorded the temperature
  - Any actions taken if a temperature excursion occurred
- **Review electronic temperature data at least 1 time each week**
- **CDC recommends the following steps in the event of a temperature excursion:**
  - Any staff who hears an alarm or notices a temperature excursion on the DDL should notify the primary or alternate vaccine coordinator immediately or report the problem to their supervisor.
  - Notify staff by labeling exposed vaccines "DO NOT USE" and placing them in a separate container apart from other vaccines (do not discard these vaccines)



CDC Vaccine Storage and Handling Toolkit www.cdc.gov/vaccines/hcp/admin/storage/toolkit/index.html

CDC You Call the Shots https://www.cdc.gov/vaccines/ed/youcalltheshots.html

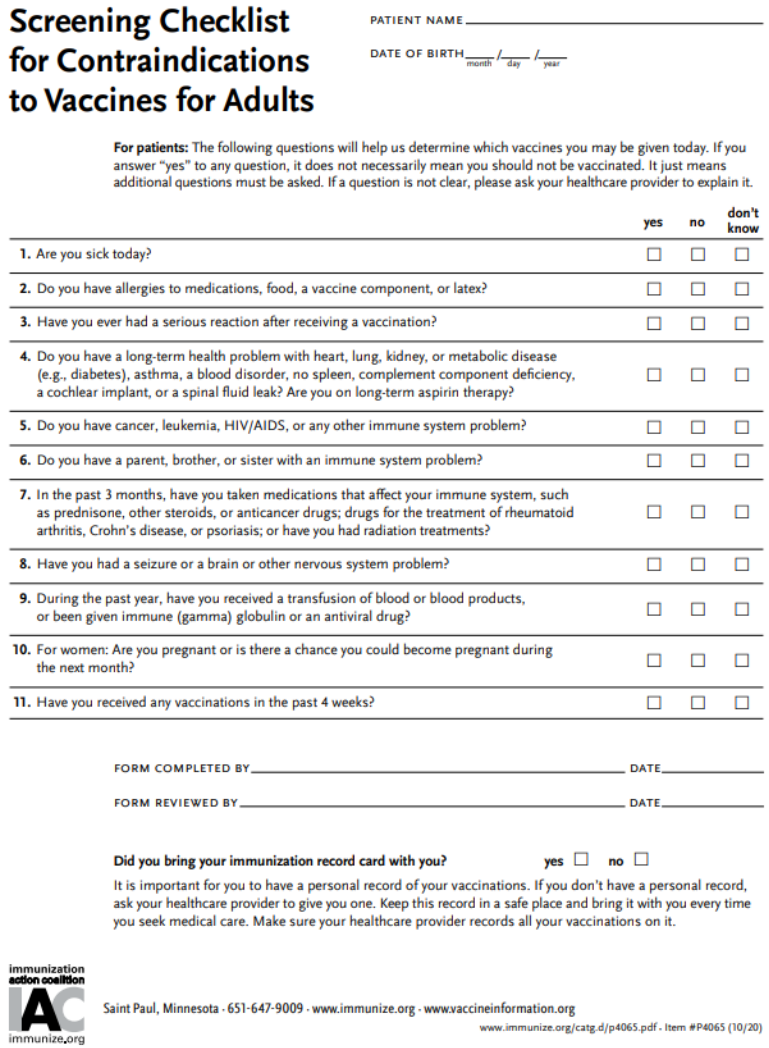
Multidose Vials and Expiration Dates

- **A multidose vial (MDV) that has been stored and handled properly may be used more than once**
- **Double-check the manufacturer's package insert (PI) for information on beyond-use date (BUD) or dose limits (if applicable)**
- **Some vaccines have a beyond use date (BUD), which is calculated based on the date the vial is first entered and the storage information in the package insert.**
  - If the vaccine has no BUD, use the expiration date provided by the manufacturer.
- **The BUD replaces the manufacturer's expiration date and should be noted on the label along with the initials of the person making the calculation.**
- **Examples of vaccines with BUDs include:**
  - Reconstituted vaccines have a limited period for use once the vaccine is mixed with a diluent. This period or BUD is listed in the package insert.
  - Multidose vials might have a specified period for use once they have been entered with a needle. For example, the package insert may state that the vaccine must be discarded 28 days after it is entered. If the vial is entered on 06/01/2019, the BUD is 06/29/2019. The vaccine should not be used after the BUD.
  - Manufacturer-shortened expiration dates may apply when vaccine is exposed to inappropriate storage conditions. The manufacturer might determine the vaccine can still be used, but will expire on an earlier date than the date on the label.

CDC Vaccine Storage and Handling Toolkit www.cdc.gov/vaccines/hcp/admin/storage/toolkit/index.html
IAC Food and Drug Administration (FDA) Product Approval: Vaccine index http://www.immunize.org/fda/

Strategies to Prevent Vaccination Errors Adverse Health Events

- Screen for contraindications and precautions every time vaccines are needed
- Use a standardized form
- Integrate into office procedures and flow



Screening Checklist for Contraindications to Vaccines for Adults

PATIENT NAME _____

DATE OF BIRTH ___ (month) / ___ (day) / ___ (year)

For patients: The following questions will help us determine which vaccines you may be given today. If you answer "yes" to any question, it does not necessarily mean you should not be vaccinated. It just means additional questions must be asked. If a question is not clear, please ask your healthcare provider to explain it.

	yes	no	don't know
1. Are you sick today?	☐	☐	☐
2. Do you have allergies to medications, food, a vaccine component, or latex?	☐	☐	☐
3. Have you ever had a serious reaction after receiving a vaccination?	☐	☐	☐
4. Do you have a long-term health problem with heart, lung, kidney, or metabolic disease (e.g., diabetes), asthma, a blood disorder, no spleen, complement component deficiency, a cochlear implant, or a spinal fluid leak? Are you on long-term aspirin therapy?	☐	☐	☐
5. Do you have cancer, leukemia, HIV/AIDS, or any other immune system problem?	☐	☐	☐
6. Do you have a parent, brother, or sister with an immune system problem?	☐	☐	☐
7. In the past 3 months, have you taken medications that affect your immune system, such as prednisone, other steroids, or anticancer drugs; drugs for the treatment of rheumatoid arthritis, Crohn's disease, or psoriasis; or have you had radiation treatments?	☐	☐	☐
8. Have you had a seizure or a brain or other nervous system problem?	☐	☐	☐
9. During the past year, have you received a transfusion of blood or blood products, or been given immune (gamma) globulin or an antiviral drug?	☐	☐	☐
10. For women: Are you pregnant or is there a chance you could become pregnant during the next month?	☐	☐	☐
11. Have you received any vaccinations in the past 4 weeks?	☐	☐	☐

FORM COMPLETED BY _____ DATE _____

FORM REVIEWED BY _____ DATE _____

Did you bring your immunization record card with you? yes ☐ no ☐

It is important for you to have a personal record of your vaccinations. If you don't have a personal record, ask your healthcare provider to give you one. Keep this record in a safe place and bring it with you every time you seek medical care. Make sure your healthcare provider records all your vaccinations on it.

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www.immunize.org/catg.d/p4065.pdf · Item #P4065 (10/20)

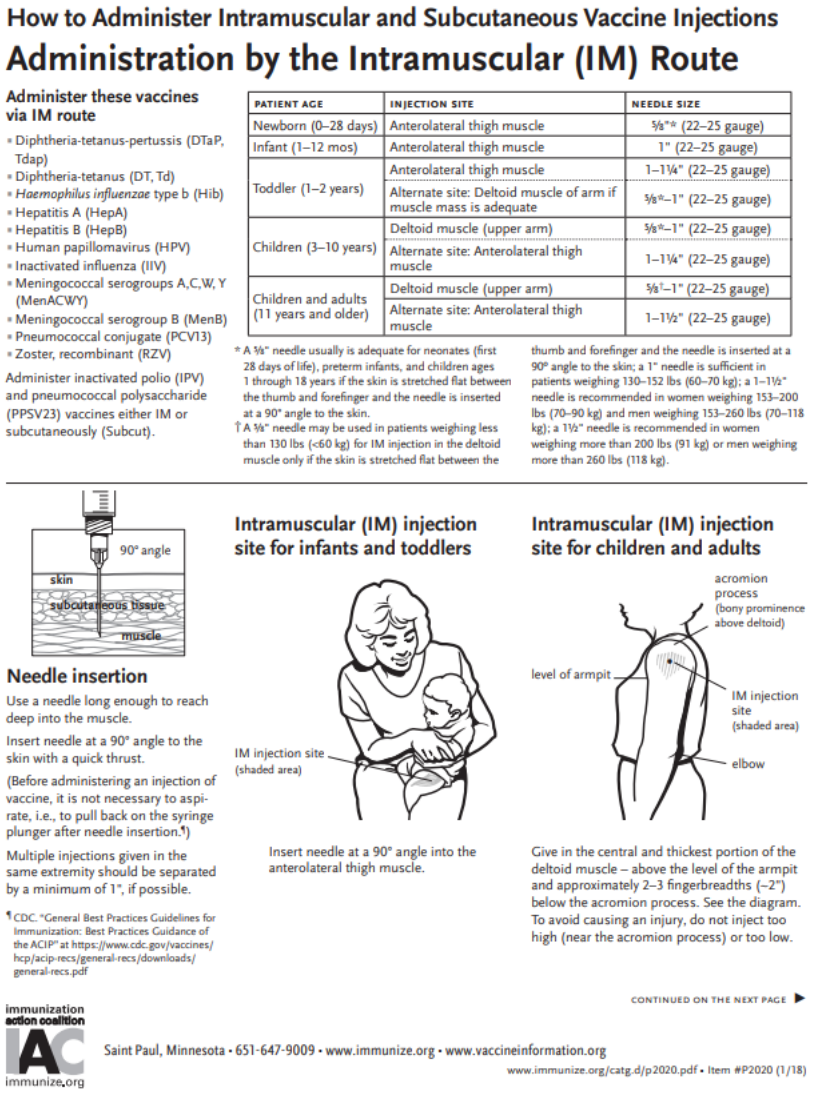
Immunize.org Screening Checklist for Contraindications and Precautions to Vaccines for Adults http://www.immunize.org/catg.d/p4065.pdf

Immunize.org Screening Checklist for Contraindications and Precautions to Vaccines for Children and Teens http://immunize.org/catg.d/p4060.pdf

Strategies to Prevent Vaccination Errors Adverse Health Events

- **Administer injectable vaccines in the correct site based on the age, muscle mass and size of the patient**

- **Identify IM injection site using anatomical landmarks**
  - Vastus lateralis muscle (anterolateral thigh)
  - Deltoid muscle (upper arm)



How to Administer Intramuscular and Subcutaneous Vaccine Injections

Administration by the Intramuscular (IM) Route

Administer these vaccines via IM route

- Diphtheria-tetanus-pertussis (DTaP, Tdap)
- Diphtheria-tetanus (DT, Td)
- *Haemophilus influenzae* type b (Hib)
- Hepatitis A (HepA)
- Hepatitis B (HepB)
- Human papillomavirus (HPV)
- Inactivated influenza (IIV)
- Meningococcal serogroups A,C,W, Y (MenACWY)
- Meningococcal serogroup B (MenB)
- Pneumococcal conjugate (PCV13)
- Zoster, recombinant (RZV)

Administer inactivated polio (IPV) and pneumococcal polysaccharide (PPSV23) vaccines either IM or subcutaneously (Subcut).

PATIENT AGE	INJECTION SITE	NEEDLE SIZE
Newborn (0–28 days)	Anterolateral thigh muscle	⅝"* (22–25 gauge)
Infant (1–12 mos)	Anterolateral thigh muscle	1" (22–25 gauge)
Toddler (1–2 years)	Anterolateral thigh muscle	1–1¼" (22–25 gauge)
	Alternate site: Deltoid muscle of arm if muscle mass is adequate	⅝*–1" (22–25 gauge)
Children (3–10 years)	Deltoid muscle (upper arm)	⅝*–1" (22–25 gauge)
	Alternate site: Anterolateral thigh muscle	1–1¼" (22–25 gauge)
Children and adults (11 years and older)	Deltoid muscle (upper arm)	⅝†–1" (22–25 gauge)
	Alternate site: Anterolateral thigh muscle	1–1½" (22–25 gauge)

* A ⅝" needle usually is adequate for neonates (first 28 days of life), preterm infants, and children ages 1 through 18 years if the skin is stretched flat between the thumb and forefinger and the needle is inserted at a 90° angle to the skin.

† A ⅝" needle may be used in patients weighing less than 130 lbs (<60 kg) for IM injection in the deltoid muscle only if the skin is stretched flat between the thumb and forefinger and the needle is inserted at a 90° angle to the skin; a 1" needle is sufficient in patients 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 (118 kg).

Needle insertion

Use a needle long enough to reach deep into the muscle.

Insert needle at a 90° angle to the skin with a quick thrust.

(Before administering an injection of vaccine, it is not necessary to aspirate, i.e., to pull back on the syringe plunger after needle insertion.¶)

Multiple injections given in the same extremity should be separated by a minimum of 1", if possible.

¶ CDC. "General Best Practices Guidelines for Immunization: Best Practices Guidance of the ACIP" at https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/downloads/general-recs.pdf

Intramuscular (IM) injection site for infants and toddlers

Insert needle at a 90° angle into the anterolateral thigh muscle.

Intramuscular (IM) injection site for children and adults

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.

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www.immunize.org/catg.d/p2020.pdf • Item #P2020 (1/18)

Immunize.org How to Administer Intramuscular and Subcutaneous Vaccine Injections http://immunize.org/catg.d/p2020.pdf

Reporting Vaccine Administration Errors

Reporting Vaccine Administration Errors

First step:

- Establish an environment that values reporting and investigating errors as part of risk management and quality improvement

What if a Vaccination Error Occurs?

Next steps:

- **Inform the patient/parent of the error**
- **Determine the status of the patient**
- **Know how to "correct" the error**
  - Contact your local health department, the vaccine manufacturer, or nipinfo@cdc.gov for guidance
  - Not all errors require revaccination!
- **Explain any needed next steps to the patient/parent**
- **Record the vaccination as it was given on the medical record**
- **Contact the immunization information system (IIS) for additional information as needed**
- **Follow the policies and procedures of your facility for medication errors**

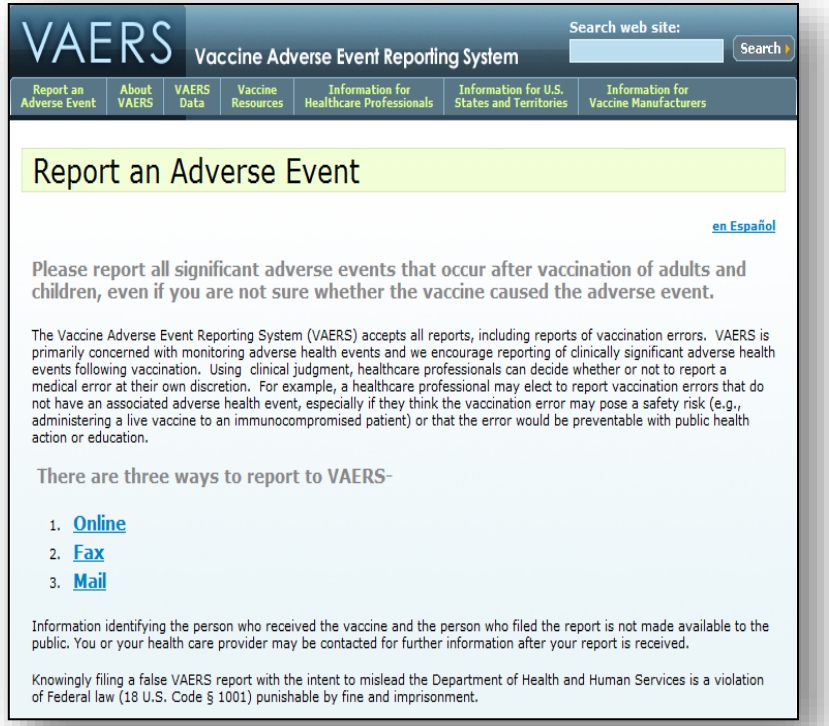
Poll Question

- **Which of the following is NOT required to be reported to VAERS:**

a. Half of the COVID vaccine dose leaked out and was not administered to the patient when the syringe became disconnected from the needle
b. Someone had an anaphylactic reaction immediately following their HPV vaccine dose
c. A patient received COVID vaccine which was prepared with the incorrect diluent
d. An adult patient inadvertently received the pediatric HepB vaccine dose

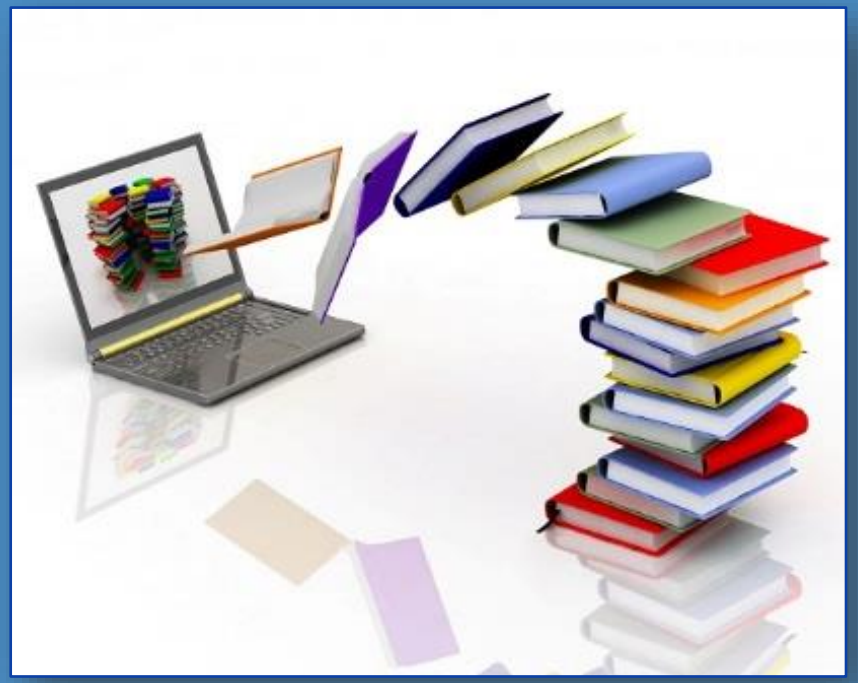
Reporting Vaccination Errors to VAERS

- Report all significant adverse events that occur after vaccination of adults and children
- VAERS accepts all reports, including reports of vaccination errors
- Providers are encouraged to report vaccination errors without health events if they believe the error may pose a safety risk
- Report the error to the Vaccine Adverse Event Reporting System (VAERS), unless otherwise indicated in the table. Providers are required to report all COVID-19 vaccine administration errors—even those not associated with an adverse event—to VAERS.



There are 3 ways to report to VAERS – online, fax, or mail

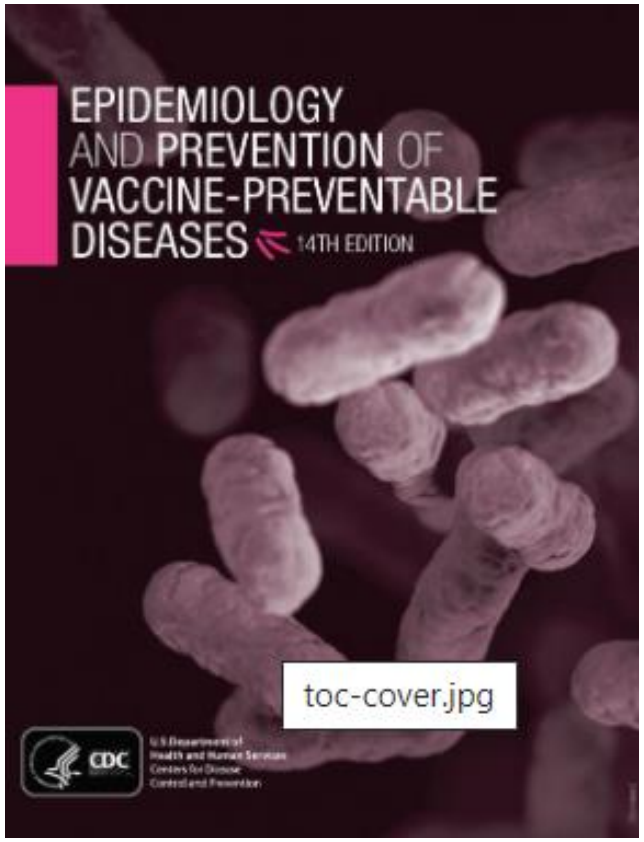
Vaccine Adverse Event Reporting System www.vaers.hhs.gov/esub/index



Additional Immunization Resources

Epidemiology and Prevention of Vaccine-Preventable Diseases ("Pink Book") Webinar Series

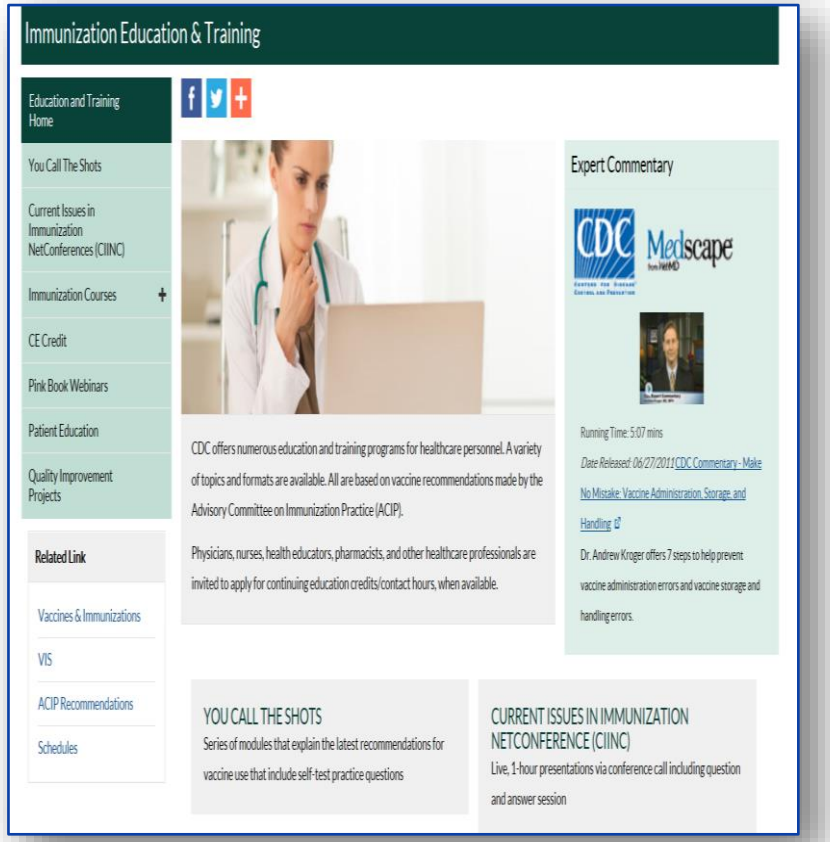
- **Webinar Series:**
  - Information about vaccine-preventable diseases and the vaccines that prevent them
- **2022 series begins in July**
- **Free continuing education**
- **For more information: www.cdc.gov/vaccines/ed/webinar-epv/index.html**



Text available online
Bound copies may be purchased

CDC Resources for Staff Education

- **Competency-based education for staff is critical**
- **Multiple educational products available free through the CDC website:**
  - Immunization courses
  - "You Call the Shots" self-study modules
  - Netconferences
- **Continuing education is available**



CDC Immunization Education and Training web page

CDC Immunization education and training web page www.cdc.gov/vaccines/ed/index.html

Thank you!

nipinfo@cdc.gov

Obtaining Continuing Education Contact Hours

- Continuing education (CE) contact hours are available for nurses, medical assistants, pharmacists, and pharmacy techs
- Expiration date is 7/27/22 for those watching the recording
- Successful completion of this continuing education activity includes the following:
  - Attending the entire live webinar or watching the webinar recording
  - Completing the evaluation available after the webinar or webinar recording
  - On the evaluation, please specify which type of continuing education contact hours you wish to obtain
- **Please note: CE certificates are NOT generated after evaluation completion—CE certificates will be sent by DOH via email within a few weeks after evaluation completion**
- If you have any questions about CE credit, contact Trang Kuss at trang.kuss@doh.wa.gov

Power of Providers Initiative

- Despite COVID-19 vaccination rates reaching over 70%, the state of Washington continues to experience outbreaks of COVID-19 disease.
- Given the rise of different COVID-19 variants, we want to vaccinate as many people against COVID-19 disease as possible.
- The Power of Providers Initiative asks ALL health care providers to help with this effort by signing up and committing to SAVE:
  - Seek
  - Ask/Educate
  - Vaccinate (or refer)
  - Empower
- Health care providers who don't vaccinate still want to help protect the community against COVID-19 disease, and they can sign up for the POP Initiative too!

Power of Providers Initiative – Sign Up

- The initiative is supported by over 20 different state health associations, Governor Inslee, and the Secretary of Health, Umair A. Shah.
- We encourage all health care providers, vaccinating or not, to sign up for the initiative and help the state reduce COVID-19 disease.
- To read more about the Power of Providers and to sign up, visit our web page at www.doh.wa.gov/pop
- Providers that sign up will receive a certificate and other materials to help them with the POP Initiative.

Questions?

Washington State Department of Health

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