Preventing Vaccine Errors: The Importance of Timing and Spacing of Doses

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Disclosures

- I have nothing to disclose

Objectives

- Know the appropriate resources governing administration and timing of vaccine doses
- Review most common causes of vaccine administration errors
- Understand how to report and mitigate vaccine administration errors when they occur and prevent them from happening in the future

Contribution of vaccination to improved survival and health: modelling 50 years of the Expanded Programme on Immunization

Andrew J Shattock, Helen C Johnson, So Yoon Sim, Austin Carter, Philipp Lambach, Raymond C W Hutubessy, Kimberly M Thompson, Kamran Badizadegan, Brian Lambert, Matthew J Ferrari, Mark Jit, Han Fu, Sheetal P Silal, Rachel A Hounsell, Richard G White, Jonathan F Mosser, Katy A M Gaythorpe, Caroline L Trotter, Ann Lindstrand, Katherine L O'Brien, Naor Bar-Zeev

Findings Since 1974, vaccination has averted 154 million deaths, including 146 million among children younger than 5 years of whom 101 million were infants younger than 1 year. For every death averted, 66 years of full health were gained on average, translating to 10·2 billion years of full health gained. We estimate that vaccination has accounted for 40% of the observed decline in global infant mortality, 52% in the African region. In 2024, a child younger than 10 years is 40% more likely to survive to their next birthday relative to a hypothetical scenario of no historical vaccination. Increased survival probability is observed even well into late adulthood.

Contribution of vaccination to improved survival and health: modelling 50 years of the Expanded Programme on Immunization. Shattock, Andrew J et al. *The Lancet*, Volume 403, Issue 10441, 2307 – 2316.

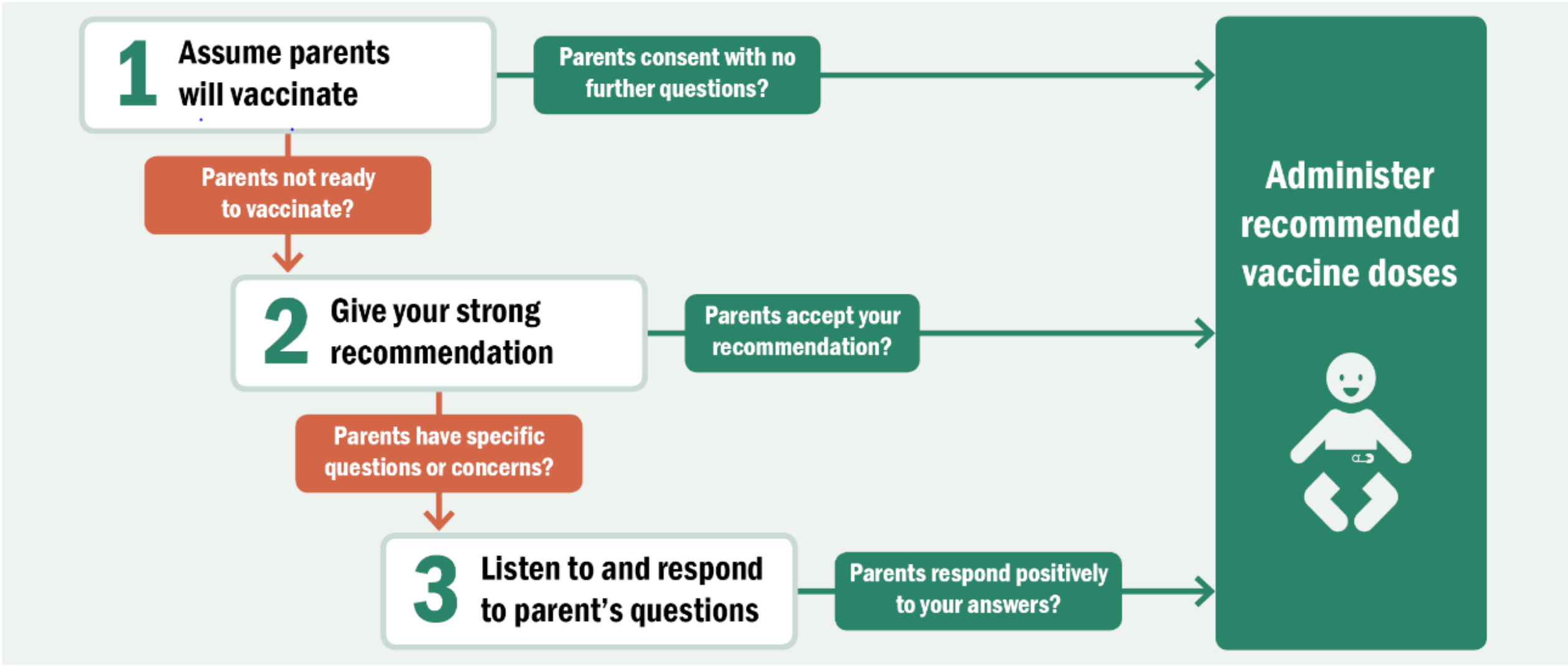
Safe Vaccine Administration and Routine Schedule Overview

Before Administering Vaccine

- Assess for needed vaccines
  - Immunization status should be reviewed at every visit
  - Check WebIZ, medical record, and/or personal shot card
  - Avoid missed opportunities for vaccination
- Screen for contraindications and precautions
  - Patients' health histories can change between visits, so need to be reviewed every time
  - Use standardized screening tool for consistency

https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-6-vaccine-administration.html

Educate Patients or Parents about Needed Vaccines



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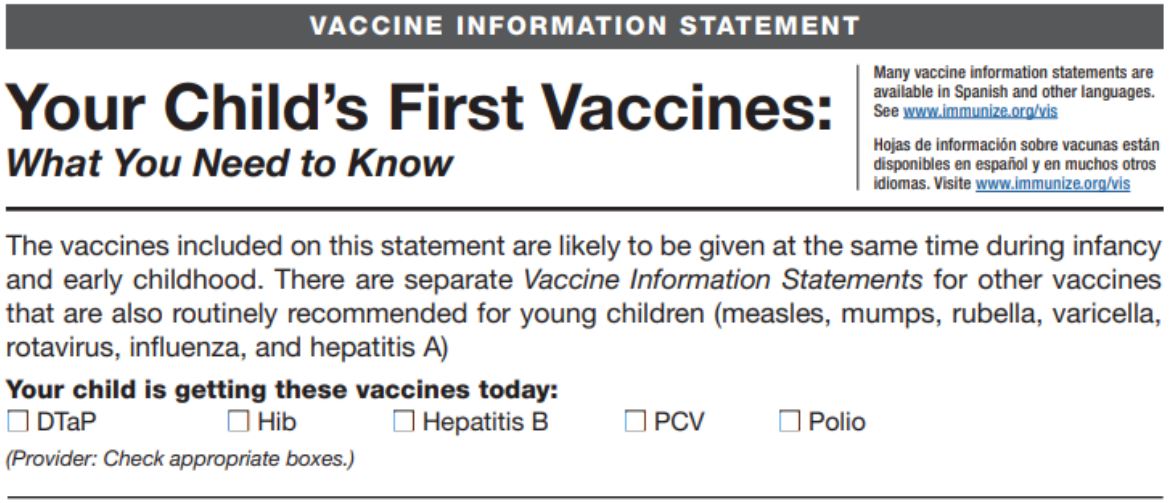
Before Administering Vaccine

- Vaccine Information Statements
  - By federal law, must be provided BEFORE vaccines are administered, REGARDLESS of the age of the person being vaccinated, EVERY TIME a dose is administered
- After-Care Instructions
  - Discuss comfort and care strategies for injection site pain, fever, and fussiness (for infants)
  - Also provide information about when to seek medical attention
  - Pain relievers may be used, but only non-aspirin-containing pain relievers in children and adolescents



VACCINE INFORMATION STATEMENT

Your Child's First Vaccines:
What You Need to Know

Many vaccine information statements are available in Spanish and other languages. See www.immunize.org/vis

Hojas de información sobre vacunas están disponibles en español y en muchos otros idiomas. Visite www.immunize.org/vis

The vaccines included on this statement are likely to be given at the same time during infancy and early childhood. There are separate *Vaccine Information Statements* for other vaccines that are also routinely recommended for young children (measles, mumps, rubella, varicella, rotavirus, influenza, and hepatitis A)

Your child is getting these vaccines today:

☐ DTaP ☐ Hib ☐ Hepatitis B ☐ PCV ☐ Polio

(Provider: Check appropriate boxes.)

https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-6-vaccine-administration.html

Vaccine Administration

- Infection control
  - Hand hygiene
  - Aseptic technique
- Choose the correct vaccine
  - Single-dose vials vs manufacturer-filled syringes vs multidose vials vs oral applicator/nasal sprayer
- Inspect the vaccine
  - Check for damage, particulate matter, or contamination; verify stored at proper temperature
- Check the expiration date of the vaccine or diluent

https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-6-vaccine-administration.html

Vaccine Administration

- Reconstitute lyophilized vaccine
  - If the wrong diluent is used, the dose is not valid and must be readministered
- Choose the correct supplies to administer vaccines by injection
  - Depends on route of administration, patient age, sex and weight, injection site, and injection technique
- Fill syringes
  - Never reuse syringe or needle
  - Never mix different vaccine products in the same syringe
  - Never transfer vaccine from one syringe to another
  - Never combine partial doses from separate vials to obtain a full dose

https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-6-vaccine-administration.html

Vaccine Administration, cont

- Procedural pain management
  - Inject rapidly without aspiration
  - Inject vaccines that cause the most pain last (MMR, PCV, and HPV may sting)
  - Breastfeed children <=2 years during vaccine injections
  - Give sweet-tasting solution to children who are not breastfed
  - Prophylactic pain relievers are not recommended
  - Position for comfort depending on age
  - Use tactile stimulation near the injection site to distract/decrease pain

https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-6-vaccine-administration.html

Vaccine Administration, cont

- Route and site for vaccination
  - Oral (PO), intranasal (NAS), subcutaneous (Subcut), Intradermal, intramuscular
  - For infants 12 months or younger, use anterolateral thigh for injection
  - For 1-2 years, anterolateral thigh is preferred but deltoid may be used if enough muscle mass
  - For 3-18 years, deltoid preferred
  - For 19 years or older, deltoid is recommended

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Vaccine Administration, cont

- Multiple vaccinations
  - Administer in different sites
  - Thigh is preferred in young children
  - Most reactive should be in different limbs if possible
  - If both vaccine and IG are administered, use separate limbs
- Vaccine supply and disposal
  - Place all syringe/needle devices in biohazard containers immediately after use
  - Empty or expired vaccine vials are considered medical waste and should be disposed of according to state regulations

https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-6-vaccine-administration.html

Patient Care after Vaccine Administration

- Managing acute reactions after vaccination
  - Anyone who administers vaccines should be prepared to manage a severe allergic reaction, including anaphylaxis
  - All healthcare professionals who administer vaccines should be aware of the potential for syncope after vaccination and monitor appropriately
- Reporting an adverse event
  - Health care providers are required by law to report certain adverse events to VAERS
- Documenting vaccinations
  - Every dose should be fully documented in the patient's medical record including date, vaccine manufacturer, vaccine lot number, name and title of person who administered the vaccine and address of the facility where the permanent record will reside, and edition of VIS and date distributed to patient

https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-6-vaccine-administration.html

Vaccine Schedules

Table 1 - Routine Schedule by Age

How to Use the Immunization Schedule

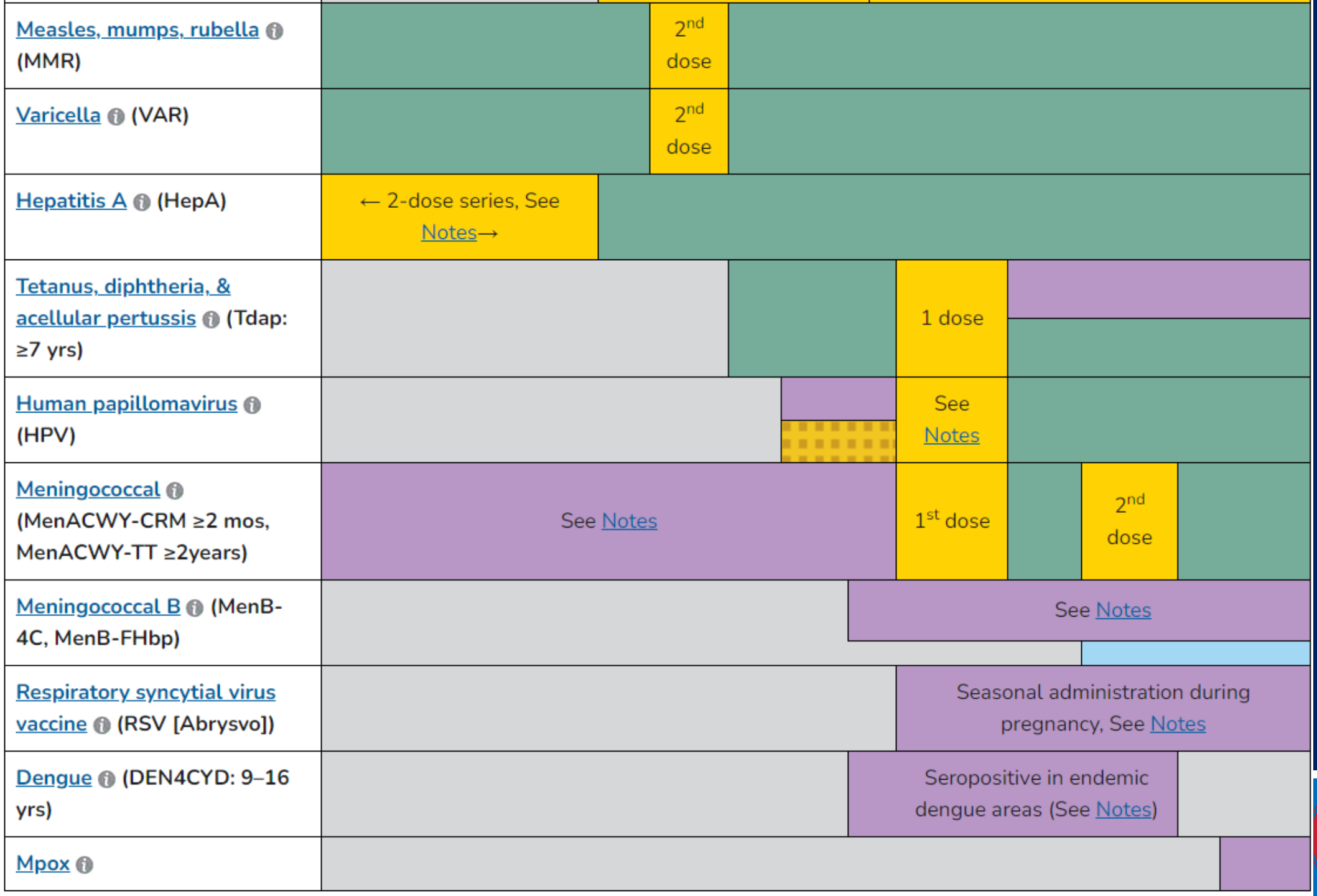
To make vaccination recommendations, healthcare providers should:

1. Determine recommended vaccine by age (**Table 1 – By Age**)
2. Determine recommended interval for catch-up vaccination (**Table 2 – Catch-up**)
3. Assess need for additional recommended vaccines by medical condition or other indication (**Table 3 – By Medical Indication**)
4. Review vaccine types, frequencies, intervals, and considerations for special situations (**Notes**)
5. Review contraindications and precautions for vaccine types (**Appendix**)
6. Review new or updated ACIP guidance (**Addendum**)

Child and Adolescent Immunization Schedule by Age | Vaccines & Immunizations | CDC

Vaccine and other immunizing agents	Birth	1 mo	2 mos	4 mos	6 mos	9 mos	12 mos	15 mos
Respiratory syncytial virus (RSV-mAb [Nirsevimab])	1 dose depending on maternal RSV vaccination status, See Notes					1 dose (8 through 19 months), See Notes		
Hepatitis B (HepB)	1st dose	←2nd dose→			←3rd dose→			
Rotavirus (RV) RV1 (2-dose series); RV5 (3-dose series)			1st dose	2nd dose	See Notes			
Diphtheria, tetanus, & acellular pertussis (DTaP: <7 yrs)			1st dose	2nd dose	3rd dose			←4th dose→
Haemophilus influenzae type b (Hib)			1st dose	2nd dose	See Notes		←3rd or 4th dose, See Notes→	
Pneumococcal conjugate (PCV15, PCV20)			1st dose	2nd dose	3rd dose		←4th dose→	
Inactivated poliovirus (IPV)			1st dose	2nd dose	←3rd dose→			
COVID-19 (1vCOV-mRNA, 1vCOV-aPS)					1 or more doses of 2024–2025 vaccine (See Notes)			
Influenza (IIV3, ccIIV3)					1 or 2 doses annually			
Influenza (LAIV3)								
Measles, mumps, rubella (MMR)					See Notes		←1st dose→	

Vaccine and other immunizing agents	18 mos	19-23 mos	2-3 yrs	4-6 yrs	7-10 yrs	11-12 yrs	13-15 yrs	16 yrs	17-18 yrs
Respiratory syncytial virus (RSV-mAb [Nirsevimab])	1 dose (8 through 19 months), See Notes								
Hepatitis B (HepB)	←3rd dose→								
Rotavirus (RV) RV1 (2-dose series); RV5 (3-dose series)									
Diphtheria, tetanus, & acellular pertussis (DTaP: <7 yrs)	←4th dose→			5th dose					
Haemophilus influenzae type b (Hib)									
Pneumococcal conjugate (PCV15, PCV20)									
Inactivated poliovirus (IPV)	←3rd dose→			4th dose					See Notes
COVID-19 (1vCOV-mRNA, 1vCOV-aPS)	1 or more doses of 2024–2025 vaccine (See Notes)								
Influenza (IIV3, ccIIV3) or Influenza (LAIV3)	1 or 2 doses annually					1 dose annually			
			1 or 2 doses annually			1 dose annually			


Measles, mumps, rubella (MMR)
2nd dose
Varicella (VAR)
2nd dose
Hepatitis A (HepA)
← 2-dose series, See Notes→
Tetanus, diphtheria, & acellular pertussis (Tdap: ≥7 yrs)
1 dose
Human papillomavirus (HPV)
See Notes
Meningococcal (MenACWY-CRM ≥2 mos, MenACWY-TT ≥2years)
See Notes
1st dose
2nd dose
Meningococcal B (MenB-4C, MenB-FHbp)
See Notes
Respiratory syncytial virus vaccine (RSV [Abrysvo])
Seasonal administration during pregnancy, See Notes
Dengue (DEN4CYD: 9–16 yrs)
Seropositive in endemic dengue areas (See Notes)
Mpox

Vaccine Schedules

Table 2 – Catch Up Schedule

Children age 4 months through 6 years

The table below provides catch-up schedules and minimum intervals between doses for children whose vaccinations have been delayed. A vaccine series does not need to be restarted, regardless of the time that has elapsed between doses. Use the section appropriate for the child's age. **Always use this table in conjunction with Table 1 and the Notes that follow.**

Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses			
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Hepatitis B	Birth	**4 weeks**	**8 weeks and at least 16 weeks after first dose.** Minimum age for the final dose is 24 weeks		
Rotavirus	**6 weeks** Maximum age for first dose is 14 weeks, 6 days.	**4 weeks**	**4 weeks** Maximum age for final dose is 8 months, 0 days		
Diphtheria, tetanus, and acellular pertussis	6 weeks	**4 weeks**	**4 weeks**	**6 months**	**6 months** A fifth dose is not necessary if the fourth dose was administered at age 4 years or older ***and*** at least 6 months after dose 3
Haemophilus influenzae type b	6 weeks	**No further doses needed** if first dose was administered at age 15 months or older. **4 weeks** if first dose was administered before the 1st birthday. **8 weeks (as final dose)** if first dose was administered at age 12 through 14 months.	**No further doses needed** if previous dose was administered at age 15 months or older **4 weeks** If current age is younger than 12 months ***and*** first dose was administered at younger than age 7 months ***and*** at least 1 previous dose was PRP-T (ActHib, Pentacel, Hiberix), Vaxelis or unknown **8 weeks and age 12 through 59 months (as final dose)** if current age is younger than 12 months ***and*** first dose was administered at age 7 through 11 months; **OR** if current age is 12 through 59 months ***and*** first dose was administered before the 1st birthday, ***and*** second dose was administered at younger than 15 months; **OR** if both doses were PedvaxHIB and were administered before the 1st birthday	**8 weeks (as final dose)** This dose only necessary for children age 12 through 59 months who received 3 doses before the 1st birthday.	

Vaccine	Minimum Age for Dose 1	Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4	Dose 4 to Dose 5
Pneumococcal conjugate	6 weeks	**No further doses needed** for healthy children if first dose was administered at age 24 months or older **4 weeks** if first dose was administered before the 1st birthday **8 weeks (as final dose for healthy children)** if first dose was administered at the 1st birthday or after	**No further doses needed** for healthy children if previous dose was administered at age 24 months or older **4 weeks** if current age is younger than 12 months **and** previous dose was administered at <7 months old **8 weeks (as final dose for healthy children)** if previous dose was administered between 7–11 months (wait until at least 12 months old); **OR** if current age is 12 months or older ***and*** at least 1 dose was administered before age 12 months	**8 weeks (as final dose)** This dose is only necessary for children age 12 through 59 months regardless of risk, or age 60 through 71 months with any risk, who received 3 doses before age 12 months.	
Inactivated poliovirus	6 weeks	**4 weeks**	**4 weeks** if current age is <4 years **6 months (as final dose)** if current age is 4 years or older	**6 months (minimum age 4 years for final dose)**	
Measles, mumps, rubella	12 months	**4 weeks**			
Varicella	12 months	**3 months**			
Hepatitis A	12 months	**6 months**			
Meningococcal ACWY	2 months MenACWY-CRM 2 years MenACWY-TT	**8 weeks**	See Notes	See Notes	

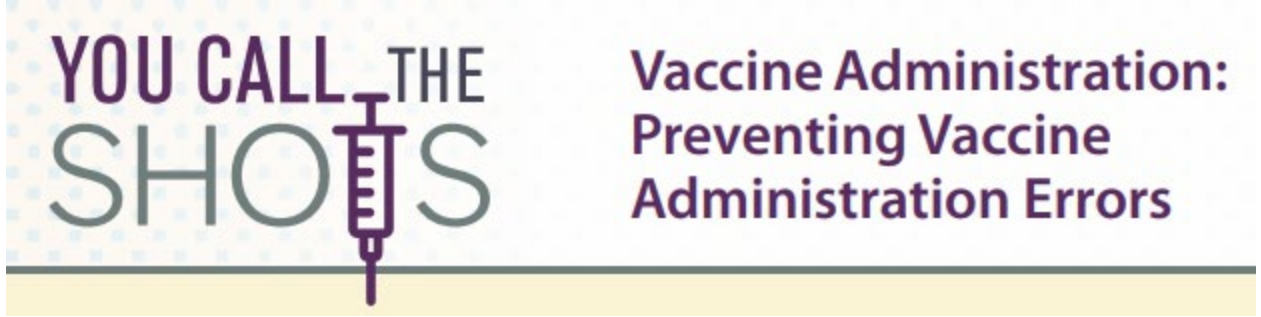
Children and adolescents age 7 through 18 years

Vaccine	Minimum Age for Dose 1	Minimum Interval Between Doses		
		Dose 1 to Dose 2	Dose 2 to Dose 3	Dose 3 to Dose 4
Meningococcal ACWY	Not Applicable (N/A)	8 weeks		
Tetanus, diphtheria; tetanus, diphtheria, and acellular pertussis	7 years	4 weeks	**4 weeks** if first dose of DTaP/DT was administered before the 1st birthday **6 months (as final dose)** if first dose of DTaP/DT or Tdap/Td was administered at or after the 1st birthday	**6 months** if first dose of DTaP/DT was administered before the 1st birthday
Human papillomavirus	9 years	Routine dosing intervals are recommended.		
Hepatitis A	N/A	6 months		
Hepatitis B	N/A	4 weeks	8 weeks *and* at least 16 weeks after first dose.	
Inactivated poliovirus	N/A	4 weeks	**6 months** A fourth dose is not necessary if the third dose was administered at age 4 years or older ***and*** at least 6 months after the previous dose.	A fourth dose of IPV is indicated if all previous doses were administered at <4 years **OR** if the third dose was administered <6 months after the second dose.
Measles, mumps, rubella	N/A	4 weeks		
Varicella	N/A	**3 months** if younger than age 13 years. **4 weeks** if age 13 years or older		
Dengue	9 years	6 months	6 months	

Vaccine Schedules

Table 3 – Medical Indication Schedule

Vaccine and other immunizing agents	Pregnancy	Immunocompromised status (excluding HIV infection)	HIV infection CD4 percentage and count[a]		CSF leak or cochlear implant	Asplenia or persistent complement component deficiencies	Heart disease or chronic lung disease	Kidney failure, End-stage renal disease or on dialysis	Chronic liver disease	Diabetes
			<15% or <200/mm³	≥15% and ≥200/mm³						
Hepatitis B										
Rotavirus		SCID[b]								
DTaP/Tdap	DTaP Tdap: 1 dose each pregnancy									
Hib		HSCT: 3 doses	See Notes			See Notes				
Pneumococcal										
IPV										
COVID-19		See Notes								
Influenza inactivated		Solid organ transplant: 18yrs (See Notes)								
LAIV3							Asthma, wheezing: 2–4 years[c]			
MMR	*									
VAR	*									
Hepatitis A										
HPV	*	3-dose series. (See Notes)								
MenACWY										
MenB										
RSV (Abrysvo)	Seasonal administration, (See Notes)									
Dengue										
Mpox	See Notes									

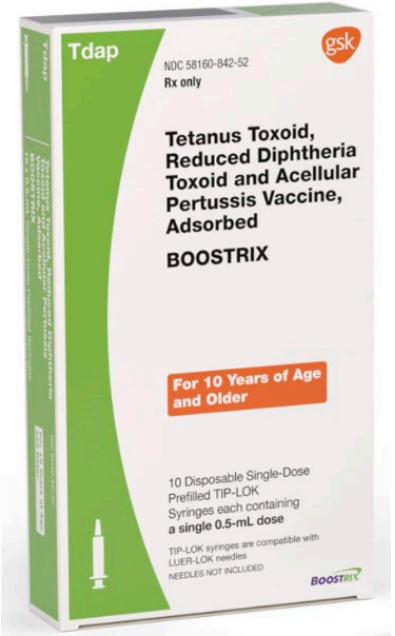


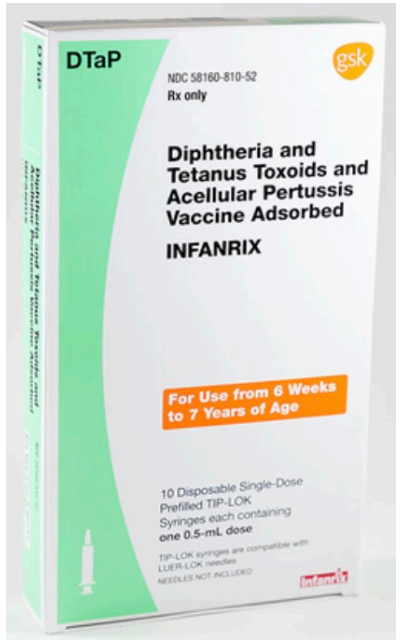
Common Error #1: Wrong vaccine, route, site, or dosage/amount, or improperly prepared

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf

Possible Preventive Actions

- Circle important information on the packaging to emphasize the difference between the vaccines
- Include the brand name with the vaccine abbreviation whenever possible in orders, medical screens, etc
- Separate vaccines into bins or other containers according to type and formulation; use color-coded identification labels on vaccine storage containers
- Store look-alike vaccines in different areas of the storage unit (e.g., pediatric and adult formulations of the same vaccine on different shelves in the unit)
- Do not list vaccines with look alike names sequentially on computer screens, order forms, or medical records, if possible
- Consider using “name alert” or “look-alike” stickers on packaging and areas where these vaccines are stored





LOOK ALIKE SOUND ALIKE

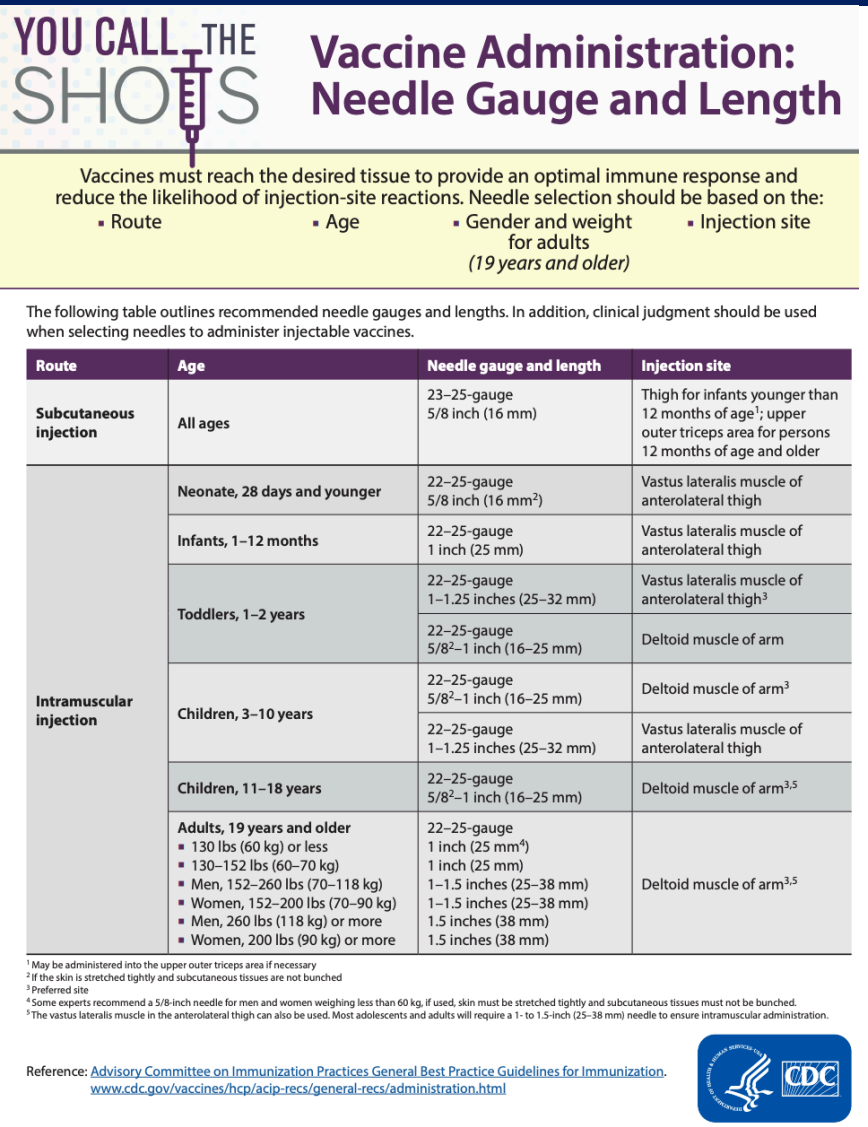
https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf

Possible Preventive Actions, cont

- Consider purchasing products with look-alike packaging from different manufacturers, if possible
- Establish “Do Not Disturb” or no-interruption areas or times when vaccines are being prepared or administered
- Prepare vaccine for one patient at a time. Once prepared, label the syringe with vaccine name
- Do not administer vaccines prepared by someone else
- Triple-check work before administering a vaccine and ask another staff member to check

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf

Possible Preventive Actions, cont



YOU CALL THE SHOTS

Vaccine Administration: Needle Gauge and Length

Vaccines must reach the desired tissue to provide an optimal immune response and reduce the likelihood of injection-site reactions. Needle selection should be based on the:

- Route
- Age
- Gender and weight for adults *(19 years and older)*
- Injection site

The following table outlines recommended needle gauges and lengths. In addition, clinical judgment should be used when selecting needles to administer injectable vaccines.

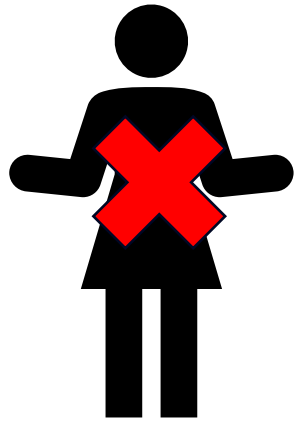
Route	Age	Needle gauge and length	Injection site
Subcutaneous injection	**All ages**	23–25-gauge 5/8 inch (16 mm)	Thigh for infants younger than 12 months of age[1]; upper outer triceps area for persons 12 months of age and older
Intramuscular injection	**Neonate, 28 days and younger**	22–25-gauge 5/8 inch (16 mm[2])	Vastus lateralis muscle of anterolateral thigh
	Infants, 1–12 months	22–25-gauge 1 inch (25 mm)	Vastus lateralis muscle of anterolateral thigh
	Toddlers, 1–2 years	22–25-gauge 1–1.25 inches (25–32 mm)	Vastus lateralis muscle of anterolateral thigh[3]
		22–25-gauge 5/8[2]–1 inch (16–25 mm)	Deltoid muscle of arm
	Children, 3–10 years	22–25-gauge 5/8[2]–1 inch (16–25 mm)	Deltoid muscle of arm[3]
		22–25-gauge 1–1.25 inches (25–32 mm)	Vastus lateralis muscle of anterolateral thigh
	Children, 11–18 years	22–25-gauge 5/8[2]–1 inch (16–25 mm)	Deltoid muscle of arm[3,5]
	Adults, 19 years and older ▪ 130 lbs (60 kg) or less ▪ 130–152 lbs (60–70 kg) ▪ Men, 152–260 lbs (70–118 kg) ▪ Women, 152–200 lbs (70–90 kg) ▪ Men, 260 lbs (118 kg) or more ▪ Women, 200 lbs (90 kg) or more	22–25-gauge 1 inch (25 mm[4]) 1 inch (25 mm) 1–1.5 inches (25–38 mm) 1–1.5 inches (25–38 mm) 1.5 inches (38 mm) 1.5 inches (38 mm)	Deltoid muscle of arm[3,5]

[1] May be administered into the upper outer triceps area if necessary
[2] If the skin is stretched tightly and subcutaneous tissues are not bunched
[3] Preferred site
[4] Some experts recommend a 5/8-inch needle for men and women weighing less than 60 kg, if used, skin must be stretched tightly and subcutaneous tissues must not be bunched.
[5] The vastus lateralis muscle in the anterolateral thigh can also be used. Most adolescents and adults will require a 1- to 1.5-inch (25–38 mm) needle to ensure intramuscular administration.

Reference: Advisory Committee on Immunization Practices General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/administration.html

- Keep reference materials on recommended sites, routes, and needle lengths for each vaccine used in your facility in the medication preparation area
- Clearly identify diluents if the manufacture's label could mislead staff into believing the diluent is the vaccines itself
- Integrate vaccine administration training into orientation and other appropriate education requirements
- Provide education when new products are added to inventory or recommendations are updated
- Use standing orders, if appropriate

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf



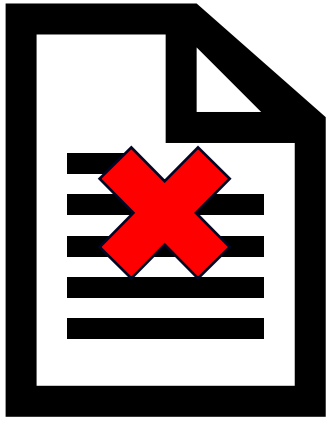
Common Error #2: Wrong patient

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf

Possible Preventive Actions

- Verify the patient's identity before administering vaccines
- Educate staff on the importance of avoiding unnecessary distractions or interruptions when staff is administering vaccine
- Prepare and administer vaccines to one patient at a time. If more than one patient needs vaccines during the same clinical encounter (e.g., parent with two children), assign different providers to each patient, if possible. Alternatively, bring only one patient's vaccines into the treatment area at a time, labeled with vaccine and patient name

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf



Error #3: Documentation errors

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf

Possible Preventive Actions

- Do not use error-prone abbreviations to document vaccine administration (e.g., use intranasal route [NAS] to document the intranasal route, not IN, which is easily confused with IM)
- Use ACIP vaccine abbreviations
- Change the appearance of look-alike names or generic abbreviations on computer screens, if possible

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf

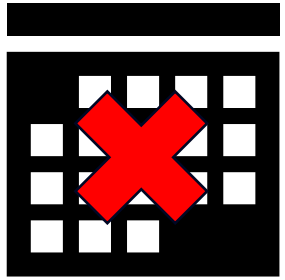
Error #4: Improperly stored and/or handled vaccine administration (e.g., expired vaccine given)

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf

Possible Preventive Actions

- Integrate vaccine storage and handling training based on manufacturer guidance and/or requirements
- Rotate vaccines so those with the earliest expiration dates are in the front of the storage unit. Use these first.
- Remove expired vaccines/diluents from storage units and areas where viable vaccines are stored
- Isolate vaccines exposure to improper temperatures and contact the state immunization program and/or the vaccine manufacturer

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf



Error #5: Scheduling errors (e.g., vaccine doses in a series administered too soon)

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf

Possible Preventive Actions

- Use standing orders, if appropriate
- Create procedures to obtain a complete vaccination history using the immunization information system (IIS), previous medical records, and personal vaccination records
- Integrate vaccine administration training, including timing and spacing of vaccines, into orientation and other appropriate education requirements
- For children, especially infants, schedule immunization visits after their birthday
- Post current immunization schedules for children and adults that staff can quickly reference in clinical areas where vaccinations may be prescribed and administered
- Post reference sheets for timing

https://www.cdc.gov/vaccines/hcp/admin/downloads/vaccine-administration-preventing-errors.pdf

If/When a Vaccine Error Occurs

- Report to Vaccine Adverse Event Reporting System (VAERS): https://vaers.hhs.gov/reportevent.html
- Notify patient/parent that a vaccine error has occurred
- Review guidance to determine if revaccination is required
- Contact ADH Immunizations Program if you have VFC-related administration concerns or need help finding appropriate resources

> Everyone is encouraged to report possible adverse events after vaccination to VAERS, even if they are not sure whether the vaccine caused the problem. In general, **you should report any side effect or health problem after vaccination that is concerning to you**.

https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-6-vaccine-administration.html

Not All Vaccine Administration Errors Require Revaccination

Errors requiring revaccination

- Hepatitis B vaccine administered by any route other than IM injection, or in adults at any site other than the deltoid or anterolateral thigh
- HPV vaccine that is administered by any route other than IM injection
- Influenza vaccine administered subcutaneously

Errors not requiring revaccination

- Any vaccination using more than the appropriate dose (e.g., DTaP administered to an adult) should be counted if the minimum age and minimum interval have been met
- Hepatitis A vaccine and meningococcal conjugate vaccine administered by the subcutaneous route, if the minimum age and minimal interval have been met

https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-6-vaccine-administration.html

Not All Vaccine Administration Errors Require Revaccination, cont

Errors requiring revaccination

- Any vaccination using less than the appropriate dose (e.g., pediatric formulation hepatitis A vaccine given to an adult) does not count and the dose should be repeated according to age unless serologic testing indicates an adequate response has developed (however, if two half-volume formulations of vaccine are administered on the same clinic day, these 2 doses can count as 1 valid dose)
- If a partial dose of an injectable vaccine is administered because the syringe or needle leaks or the patient jerks away

Errors not requiring revaccination

- Administering a dose 4 or fewer days earlier than the minimum interval or age is unlikely to have a substantially negative effect on the immune response to that dose. Vaccine doses administered in this 4-day grace period before the minimum interval or age, with a few exceptions, are considered valid. However, state or local mandates might supersede this guideline.
- MMR, varicella, and MMRV administered by IM injection if the minimum age and minimum interval have been met

https://www.cdc.gov/pinkbook/hcp/table-of-contents/chapter-6-vaccine-administration.html

Thank you for your attention!

Please contact me with any questions!

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