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Recommended Child and Adolescent Immunization Schedule
for ages 18 years or younger

UNITED STATES
2023

Vaccines in the Child and Adolescent Immunization Schedule*

Vaccine	Abbreviation(s)	Trade name(s)
COVID-19	**1vCOV-mRNA**	Comirnaty®/Pfizer-BioNTech COVID-19 Vaccine
		SPIKEVAX®/Moderna COVID-19 Vaccine
	2vCOV-mRNA	Pfizer-BioNTech COVID-19 Vaccine, Bivalent
		Moderna COVID-19 Vaccine, Bivalent
	1vCOV-aPS	Novavax COVID-19 Vaccine
Dengue vaccine	**DEN4CYD**	Dengvaxia®
Diphtheria, tetanus, and acellular pertussis vaccine	**DTaP**	Daptacel® Infanrix®
Diphtheria, tetanus vaccine	**DT**	No trade name
Haemophilus influenzae type b vaccine	**Hib (PRP-T)**	ActHIB® Hiberix® PedvaxHIB®
	Hib (PRP-OMP)	
Hepatitis A vaccine	**HepA**	Havrix® Vaqta®
Hepatitis B vaccine	**HepB**	Engerix-B® Recombivax HB®
Human papillomavirus vaccine	**HPV**	Gardasil 9®
Influenza vaccine (inactivated)	**IIV4**	Multiple
Influenza vaccine (live, attenuated)	**LAIV4**	FluMist® Quadrivalent
Measles, mumps, and rubella vaccine	**MMR**	M-M-R II® Priorix®
Meningococcal serogroups A, C, W, Y vaccine	**MenACWY-D**	Menactra®
	MenACWY-CRM	Menveo®
	MenACWY-TT	MenQuadfi®
Meningococcal serogroup B vaccine	**MenB-4C**	Bexsero®
	MenB-FHbp	Trumenba®
Pneumococcal conjugate vaccine	**PCV13** **PCV15**	Prevnar 13® Vaxneuvance™
Pneumococcal polysaccharide vaccine	**PPSV23**	Pneumovax 23®
Poliovirus vaccine (inactivated)	**IPV**	IPOL®
Rotavirus vaccine	**RV1** **RV5**	Rotarix® RotaTeq®
Tetanus, diphtheria, and acellular pertussis vaccine	**Tdap**	Adacel® Boostrix®
Tetanus and diphtheria vaccine	**Td**	Tenivac® Tdvax™
Varicella vaccine	**VAR**	Varivax®
Combination vaccines *(use combination vaccines instead of separate injections when appropriate)*		
DTaP, hepatitis B, and inactivated poliovirus vaccine	**DTaP-HepB-IPV**	Pediarix®
DTaP, inactivated poliovirus, and *Haemophilus influenzae* type b vaccine	**DTaP-IPV/Hib**	Pentacel®
DTaP and inactivated poliovirus vaccine	**DTaP-IPV**	Kinrix® Quadracel®
DTaP, inactivated poliovirus, *Haemophilus influenzae* type b, and hepatitis B vaccine	**DTaP-IPV-Hib-HepB**	Vaxelis®
Measles, mumps, rubella, and varicella vaccine	**MMRV**	ProQuad®

*Administer recommended vaccines if immunization history is incomplete or unknown. Do not restart or add doses to vaccine series for extended intervals between doses. When a vaccine is not administered at the recommended age, administer at a subsequent visit. The use of trade names is for identification purposes only and does not imply endorsement by the ACIP or CDC.

How to use the child and adolescent immunization schedule

1 Determine recommended vaccine by age **(Table 1)**

2 Determine recommended interval for catch-up vaccination **(Table 2)**

3 Assess need for additional recommended vaccines by medical condition or other indication **(Table 3)**

4 Review vaccine types, frequencies, intervals, and considerations for special situations **(Notes)**

5 Review contraindications and precautions for vaccine types **(Appendix)**

Recommended by the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/acip) and approved by the Centers for Disease Control and Prevention (www.cdc.gov), American Academy of Pediatrics (www.aap.org), American Academy of Family Physicians (www.aafp.org), American College of Obstetricians and Gynecologists (www.acog.org), American College of Nurse-Midwives (www.midwife.org), American Academy of Physician Associates (www.aapa.org), and National Association of Pediatric Nurse Practitioners (www.napnap.org).

Report

- Suspected cases of reportable vaccine-preventable diseases or outbreaks to your state or local health department
- Clinically significant adverse events to the Vaccine Adverse Event Reporting System (VAERS) at www.vaers.hhs.gov or 800-822-7967

Questions or comments

Contact www.cdc.gov/cdc-info or 800-CDC-INFO (800-232-4636), in English or Spanish, 8 a.m.–8 p.m. ET, Monday through Friday, excluding holidays

Download the CDC Vaccine Schedules app for providers at www.cdc.gov/vaccines/schedules/hcp/schedule-app.html

Helpful information

- Complete Advisory Committee on Immunization Practices (ACIP) recommendations: www.cdc.gov/vaccines/hcp/acip-recs/index.html
- *General Best Practice Guidelines for Immunization* (including contraindications and precautions): www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html
- Vaccine information statements: www.cdc.gov/vaccines/hcp/vis/index.html
- Manual for the Surveillance of Vaccine-Preventable Diseases (including case identification and outbreak response): www.cdc.gov/vaccines/pubs/surv-manual
- ACIP Shared Clinical Decision-Making Recommendations www.cdc.gov/vaccines/acip/acip-scdm-faqs.html

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Scan QR code for access to online schedule

CS310020-C

Table 1 Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

These recommendations must be read with the notes that follow. For those who fall behind or start late, provide catch-up vaccination at the earliest opportunity as indicated by the green bars.
To determine minimum intervals between doses, see the catch-up schedule (Table 2).

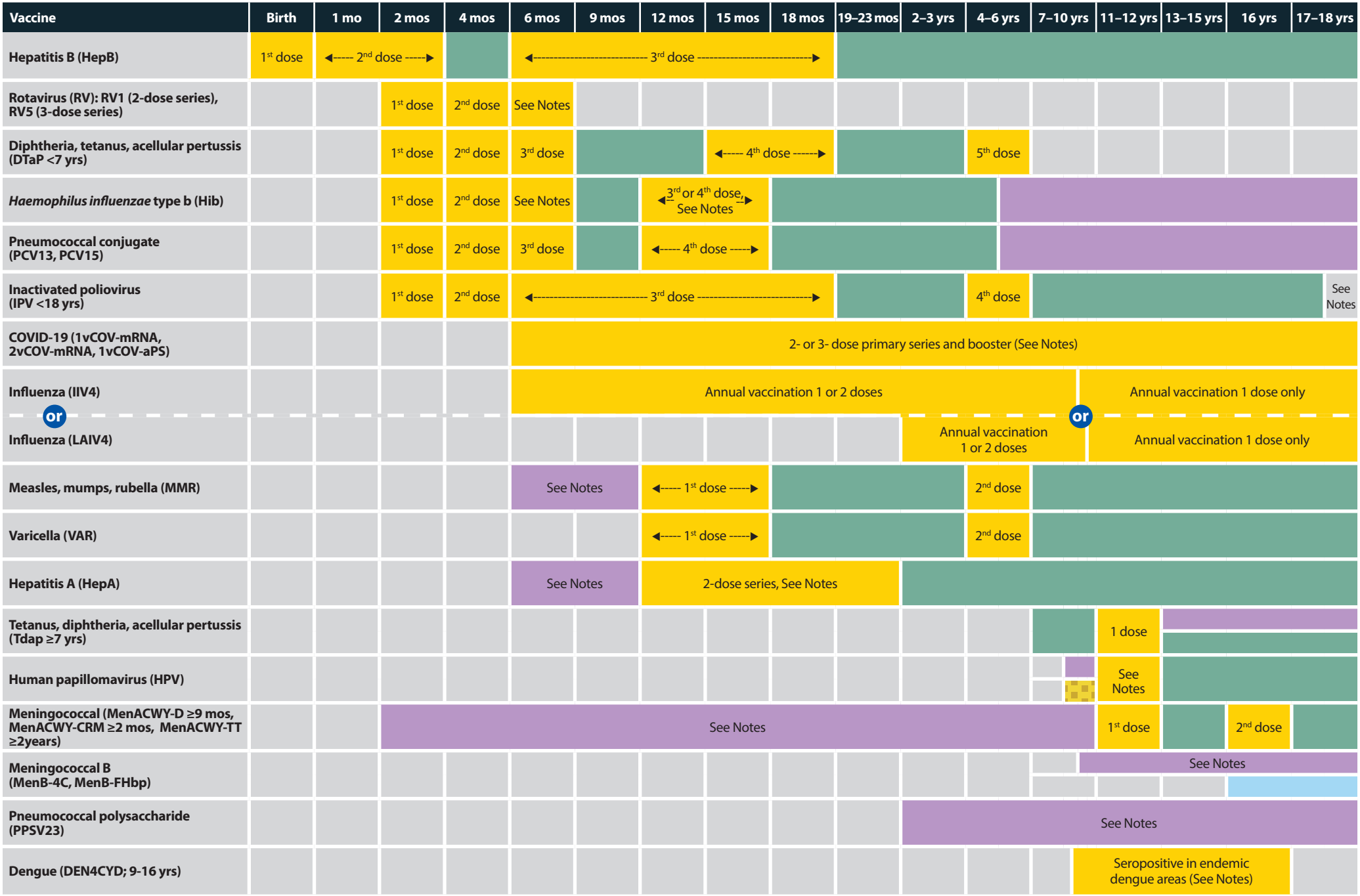

Table 2 Recommended Catch-up Immunization Schedule for Children and Adolescents Who Start Late or Who Are More than 1 Month Behind, United States, 2023

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
Children age 4 months through 6 years					
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**
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.	
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 aged 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 9 months MenACWY-D 2 years MenACWY-TT	**8 weeks**	See Notes	See Notes	
Children and adolescents age 7 through 18 years					
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		

Table 3

Recommended Child and Adolescent Immunization Schedule by Medical Indication, United States, 2023

Always use this table in conjunction with Table 1 and the Notes that follow.

VACCINE	INDICATION										
	Pregnancy	Immunocompromised status (excluding HIV infection)	HIV infection CD4+ count[a]		Kidney failure, end-stage renal disease, or on hemodialysis	Heart disease or chronic lung disease	CSF leak or cochlear implant	Asplenia or persistent complement component deficiencies	Chronic liver disease	Diabetes
			<15% or total CD4 cell count of <200/mm³	≥15% and total CD4 cell count of ≥200/mm³						
Hepatitis B										
Rotavirus		SCID[b]								
Diphtheria, tetanus, and acellular pertussis (DTaP)										
Haemophilus influenzae type b										
Pneumococcal conjugate										
Inactivated poliovirus										
COVID-19		See Notes	See Notes							
Influenza (IIV4)										
or										
Influenza (LAIV4)						Asthma, wheezing: 2–4yrs[c]				
Measles, mumps, rubella	*									
Varicella	*									
Hepatitis A										
Tetanus, diphtheria, and acellular pertussis (Tdap)										
Human papillomavirus	*									
Meningococcal ACWY										
Meningococcal B										
Pneumococcal polysaccharide										
Dengue										

- Vaccination according to the routine schedule recommended
- Recommended for persons with an additional risk factor for which the vaccine would be indicated
- Vaccination is recommended, and additional doses may be necessary based on medical condition or vaccine. See Notes.
- Precaution–vaccine might be indicated if benefit of protection outweighs risk of adverse reaction
- Contraindicated or not recommended–vaccine should not be administered
  *Vaccinate after pregnancy
- No recommendation/not applicable

a. For additional information regarding HIV laboratory parameters and use of live vaccines, see the *General Best Practice Guidelines for Immunization*, "Altered Immunocompetence," at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html and Table 4-1 (footnote J) at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html.
b. Severe Combined Immunodeficiency
c. LAIV4 contraindicated for children 2–4 years of age with asthma or wheezing during the preceding 12 months

Notes

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

For vaccination recommendations for persons ages 19 years or older, see the Recommended Adult Immunization Schedule, 2023.

Additional information

- Consult relevant ACIP statements for detailed recommendations at www.cdc.gov/vaccines/hcp/acip-recs/index.html.
- For calculating intervals between doses, 4 weeks = 28 days. Intervals of ≥4 months are determined by calendar months.
- Within a number range (e.g., 12–18), a dash (–) should be read as "through."
- Vaccine doses administered ≤4 days before the minimum age or interval are considered valid. Doses of any vaccine administered ≥5 days earlier than the minimum age or minimum interval should not be counted as valid and should be repeated as age appropriate. **The repeat dose should be spaced after the invalid dose by the recommended minimum interval.** For further details, see Table 3-2, Recommended and minimum ages and intervals between vaccine doses, in *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/timing.html.
- Information on travel vaccination requirements and recommendations is available at www.cdc.gov/travel/.
- For vaccination of persons with immunodeficiencies, see Table 8-1, Vaccination of persons with primary and secondary immunodeficiencies, in *General Best Practice Guidelines for Immunization* at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/immunocompetence.html, and Immunization in Special Clinical Circumstances (In: Kimberlin DW, Barnett ED, Lynfield Ruth, Sawyer MH, eds. *Red Book: 2021–2024 Report of the Committee on Infectious Diseases*. 32nd ed. Itasca, IL: American Academy of Pediatrics; 2021:72–86).
- For information about vaccination in the setting of a vaccine-preventable disease outbreak, contact your state or local health department.
- The National Vaccine Injury Compensation Program (VICP) is a no-fault alternative to the traditional legal system for resolving vaccine injury claims. All vaccines included in the child and adolescent vaccine schedule are covered by VICP except dengue, PPSV23, and COVID-19 vaccines. COVID-19 vaccines that are authorized or approved by the FDA are covered by the Countermeasures Injury Compensation Program (CICP). For more information, see www.hrsa.gov/vaccinecompensation or www.hrsa.gov/cicp.

COVID-19 vaccination (minimum age: 6 months [Moderna and Pfizer-BioNTech COVID-19 vaccines], 12 years [Novavax COVID-19 Vaccine])

Routine vaccination

- **Primary series:**
  - **Age 6 months–4 years:** 2-dose series at 0, 4-8 weeks (Moderna) or 3-dose series at 0, 3-8, 11-16 weeks (Pfizer-BioNTech)
  - **Age 5–11 years:** 2-dose series at 0, 4-8 weeks (Moderna) or 2-dose series at 0, 3-8 weeks (Pfizer-BioNTech)
  - **Age 12–18 years:** 2-dose series at 0, 4-8 weeks (Moderna) or 2-dose series at 0, 3-8 weeks (Novavax, Pfizer-BioNTech)
- For **booster dose recommendations** see www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html

Special situations

Persons who are moderately or severely immunocompromised

- **Primary series**
  - **Age 6 months–4 years:** 3-dose series at 0, 4, 8 weeks (Moderna) or 3-dose series at 0, 3, 11 weeks (Pfizer-BioNTech)
  - **Age 5–11 years:** 3-dose series at 0, 4, 8 weeks (Moderna) or 3-dose series at 0, 3, 7 weeks (Pfizer-BioNTech)
  - **Age 12–18 years:** 3-dose series at 0, 4, 8 weeks (Moderna) or 2-dose series at 0, 3 weeks (Novavax) or 3-dose series at 0, 3, 7 weeks (Pfizer-BioNTech)
- **Booster dose:** see www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html
- **Pre-exposure prophylaxis** (monoclonal antibodies) may be considered to complement COVID-19 vaccination. See www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#immunocompromised

For Janssen COVID-19 Vaccine recipients see COVID-19 schedule at www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html

Note: Administer an age-appropriate vaccine product for each dose. Current COVID-19 schedule and dosage formulation available at www.cdc.gov/vaccines/covid-19/downloads/COVID-19-immunization-schedule-ages-6months-older.pdf. For more information on Emergency Use Authorization (EUA) indications for COVID-19 vaccines, see www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines.

Dengue vaccination (minimum age: 9 years)

Routine vaccination

- Age 9–16 years living in areas with endemic dengue **AND** have laboratory confirmation of previous dengue infection
  - 3-dose series administered at 0, 6, and 12 months
- Endemic areas include Puerto Rico, American Samoa, US Virgin Islands, Federated States of Micronesia, Republic of Marshall Islands, and the Republic of Palau. For updated guidance on dengue endemic areas and pre-vaccination laboratory testing see www.cdc.gov/mmwr/volumes/70/rr/rr7006a1.htm?s_cid=rr7006a1_w and www.cdc.gov/dengue/vaccine/hcp/index.html
- Dengue vaccine should not be administered to children traveling to or visiting endemic dengue areas.

Diphtheria, tetanus, and pertussis (DTaP) vaccination (minimum age: 6 weeks [4 years for Kinrix® or Quadracel®])

Routine vaccination

- 5-dose series at age 2, 4, 6, 15–18 months, 4–6 years
  - **Prospectively:** Dose 4 may be administered as early as age 12 months if at least 6 months have elapsed since dose 3.
  - **Retrospectively:** A 4th dose that was inadvertently administered as early as age 12 months may be counted if at least 4 months have elapsed since dose 3.

Catch-up vaccination

- Dose 5 is not necessary if dose 4 was administered at age 4 years or older and at least 6 months after dose 3.
- For other catch-up guidance, see Table 2.

Special situations

- **Wound management** in children less than age 7 years with history of 3 or more doses of tetanus-toxoid-containing vaccine: For all wounds except clean and minor wounds, administer DTaP if more than 5 years since last dose of tetanus-toxoid-containing vaccine. For detailed information, see www.cdc.gov/mmwr/volumes/67/rr/rr6702a1.htm.

Notes

Haemophilus influenzae type b vaccination
(minimum age: 6 weeks)

Routine vaccination

- **ActHIB®, Hiberix®, Pentacel®, or Vaxelis®:** 4-dose series (3-dose primary series at age 2, 4, and 6 months, followed by a booster dose* at age 12–15 months)
  - *Vaxelis® is not recommended for use as a booster dose. A different Hib-containing vaccine should be used for the booster dose.
- **PedvaxHIB®:** 3-dose series (2-dose primary series at age 2 and 4 months, followed by a booster dose at age 12–15 months)

Catch-up vaccination

- **Dose 1 at age 7–11 months:** Administer dose 2 at least 4 weeks later and dose 3 (final dose) at age12–15 months or 8 weeks after dose 2 (whichever is later).
- **Dose 1 at age 12–14 months:** Administer dose 2 (final dose) at least 8 weeks after dose 1.
- **Dose 1 before age 12 months and dose 2 before age 15 months:** Administer dose 3 (final dose) at least 8 weeks after dose 2.
- **2 doses of PedvaxHIB® before age 12 months:** Administer dose 3 (final dose) at age12–59 months and at least 8 weeks after dose 2.
- **1 dose administered at age 15 months or older:** No further doses needed
- **Unvaccinated at age 15–59 months:** Administer 1 dose.
- **Previously unvaccinated children age 60 months or older who are not considered high risk:** Do not require catch-up vaccination

For other catch-up guidance, see Table 2. Vaxelis® can be used for catch-up vaccination in children less than age 5 years. Follow the catch-up schedule even if Vaxelis® is used for one or more doses. For detailed information on use of Vaxelis® see www.cdc.gov/mmwr/volumes/69/wr/mm6905a5.htm.

Special situations

- **Chemotherapy or radiation treatment:**
  Age 12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

  Doses administered within 14 days of starting therapy or during therapy should be repeated at least 3 months after therapy completion.
- **Hematopoietic stem cell transplant (HSCT):**
  - 3-dose series 4 weeks apart starting 6 to 12 months after successful transplant, regardless of Hib vaccination history
- **Anatomic or functional asplenia (including sickle cell disease):**
  Age 12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

  Unvaccinated persons age 5 years or older*
  - 1 dose
- **Elective splenectomy:**
  Unvaccinated persons age 15 months or older*
  - 1 dose (preferably at least 14 days before procedure)
- **HIV infection:**
  Age 12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

  Unvaccinated persons age 5–18 years*
  - 1 dose
- **Immunoglobulin deficiency, early component complement deficiency:**
  Age 12–59 months
  - Unvaccinated or only 1 dose before age 12 months: 2 doses, 8 weeks apart
  - 2 or more doses before age 12 months: 1 dose at least 8 weeks after previous dose

*_Unvaccinated_ = Less than routine series (through age 14 months) OR no doses (age 15 months or older)

Hepatitis A vaccination
(minimum age: 12 months for routine vaccination)

Routine vaccination

- 2-dose series (minimum interval: 6 months) at age 12–23 months

Catch-up vaccination

- Unvaccinated persons through age 18 years should complete a 2-dose series (minimum interval: 6 months).
- Persons who previously received 1 dose at age 12 months or older should receive dose 2 at least 6 months after dose 1.
- Adolescents age 18 years or older may receive the combined HepA and HepB vaccine, **Twinrix®**, as a 3-dose series (0, 1, and 6 months) or 4-dose series (3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months).

International travel

- Persons traveling to or working in countries with high or intermediate endemic hepatitis A (www.cdc.gov/travel/):
  - **Infants age 6–11 months**: 1 dose before departure; revaccinate with 2 doses (separated by at least 6 months) between age 12–23 months.
  - **Unvaccinated age 12 months or older**: Administer dose 1 as soon as travel is considered.

Hepatitis B vaccination
(minimum age: birth)

Routine vaccination

- 3-dose series at age 0, 1–2, 6–18 months **(use monovalent HepB vaccine for doses administered before age 6 weeks)**
  - Birth weight ≥2,000 grams: 1 dose within 24 hours of birth if medically stable
  - Birth weight <2,000 grams: 1 dose at chronological age 1 month or hospital discharge (whichever is earlier and even if weight is still <2,000 grams).
- Infants who did not receive a birth dose should begin the series as soon as possible (see Table 2 for minimum intervals).
- Administration of 4 doses is permitted when a combination vaccine containing HepB is used after the birth dose.
- **Minimum intervals (see Table 2):** when 4 doses are administered, substitute "dose 4" for "dose 3" in these calculations
- **Final (3rd or 4th) dose:** age 6–18 months **(minimum age 24 weeks)**
- **Mother is HBsAg-positive**
  - **Birth dose (monovalent HepB vaccine only):** administer **HepB vaccine** and **hepatitis B immune globulin (HBIG)** (in separate limbs) within 12 hours of birth, regardless of birth weight.
  - **Birth weight <2000 grams:** administer 3 additional doses of HepB vaccine beginning at age 1 month (total of 4 doses)
  - **Final (3rd or 4th) dose:** administer at age 6 months **(minimum age 24 weeks)**
  - Test for HBsAg and anti-HBs at age 9–12 months. If HepB series is delayed, test 1–2 months after final dose. Do not test before age 9 months.

Notes

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- **Mother is HBsAg-unknown**

  If other evidence suggestive of maternal hepatitis B infection exists (e.g., presence of HBV DNA, HBeAg-positive, or mother known to have chronic hepatitis B infection), manage infant as if mother is HBsAg-positive

  - **Birth dose (monovalent HepB vaccine only):**
    - Birth weight ≥2,000 grams: administer **HepB vaccine** within 12 hours of birth. Determine mother's HBsAg status as soon as possible. If mother is determined to be HBsAg-positive, administer **HBIG** as soon as possible (in separate limb), but no later than 7 days of age.
    - Birth weight <2,000 grams: administer **HepB vaccine** and **HBIG** (in separate limbs) within 12 hours of birth. Administer 3 additional doses of **HepB vaccine** beginning at age 1 month (total of 4 doses)
  - **Final (3rd or 4th) dose:** administer at age 6 months **(minimum age 24 weeks)**
  - If mother is determined to be HBsAg-positive or if status remains unknown, test for HBsAg and anti-HBs at age 9–12 months. If HepB series is delayed, test 1–2 months after final dose. Do not test before age 9 months.

Catch-up vaccination

- Unvaccinated persons should complete a 3-dose series at 0, 1–2, 6 months. See Table 2 for minimum intervals
- Adolescents age 11–15 years may use an alternative 2-dose schedule with at least 4 months between doses (adult formulation **Recombivax HB®** only).
- Adolescents age 18 years or older may receive:
  - **Heplisav-B®:** 2-dose series at least 4 weeks apart
  - **PreHevbrio®:** 3-dose series at 0, 1, and 6 months
  - Combined HepA and HepB vaccine, **Twinrix®:** 3-dose series (0, 1, and 6 months) or 4-dose series (3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months).

Special situations

- Revaccination is not generally recommended for persons with a normal immune status who were vaccinated as infants, children, adolescents, or adults.
- **Post-vaccination serology testing and revaccination** (if anti-HBs < 10mIU/mL) is recommended for certain populations, including:
  - Infants born to HBsAg-positive mothers
  - Persons who are predialysis or on maintenance dialysis
  - Other immunocompromised persons
  - For detailed revaccination recommendations, see www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/hepb.html.

Note: Heplisav-B and PreHevbrio are not recommended in pregnancy due to lack of safety data in pregnant persons

Human papillomavirus vaccination (minimum age: 9 years)

Routine and catch-up vaccination

- HPV vaccination routinely recommended at **age 11–12 years (can start at age 9 years)** and catch-up HPV vaccination recommended for all persons through age 18 years if not adequately vaccinated
- 2- or 3-dose series depending on age at initial vaccination:
  - **Age 9–14 years at initial vaccination**: 2-dose series at 0, 6–12 months (minimum interval: 5 months; repeat dose if administered too soon)
  - **Age 15 years or older at initial vaccination**: 3-dose series at 0, 1–2 months, 6 months (minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 12 weeks / dose 1 to dose 3: 5 months; repeat dose if administered too soon)
- **Interrupted schedules:** If vaccination schedule is interrupted, the series does not need to be restarted.
- No additional dose recommended when any HPV vaccine series has been completed using the recommended dosing intervals.

Special situations

- **Immunocompromising conditions, including HIV infection:** 3-dose series, even for those who initiate vaccination at age 9 through 14 years.
- **History of sexual abuse or assault:** Start at age 9 years
- **Pregnancy:** Pregnancy testing not needed before vaccination; HPV vaccination not recommended until after pregnancy; no intervention needed if vaccinated while pregnant

Influenza vaccination (minimum age: 6 months [IIV], 2 years [LAIV4], 18 years [recombinant influenza vaccine, RIV4])

Routine vaccination

- Use any influenza vaccine appropriate for age and health status annually:
  - 2 doses, separated by at least 4 weeks, for **children age 6 months–8 years** who have received fewer than 2 influenza vaccine doses before July 1, 2022, or whose influenza vaccination history is unknown (administer dose 2 even if the child turns 9 between receipt of dose 1 and dose 2)
  - 1 dose for **children age 6 months–8 years** who have received at least 2 influenza vaccine doses before July 1, 2022
  - 1 dose for **all persons age 9 years or older**
  - For the 2022-2023 season, see www.cdc.gov/mmwr/volumes/71/rr/rr7101a1.htm.
  - For the 2023–24 season, see the 2023–24 ACIP influenza vaccine recommendations.

Special situations

- **Egg allergy, hives only**: Any influenza vaccine appropriate for age and health status annually
- **Egg allergy with symptoms other than hives** (e.g., angioedema, respiratory distress) or required epinephrine or another emergency medical intervention: Any influenza vaccine appropriate for age and health status may be administered. If using egg-based IIV4 or LAIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions.
- **Severe allergic reaction (e.g., anaphylaxis) to a vaccine component or a previous dose of any influenza vaccine:** see Appendix listing contraindications and precautions
- **Close contacts (e.g., caregivers, healthcare personnel) of severely immunosuppressed persons who require a protected environment:** these persons should not receive LAIV4. If LAIV4 is given, they should avoid contact with/caring for such immunosuppressed persons for 7 days after vaccination.

Measles, mumps, and rubella vaccination (minimum age: 12 months for routine vaccination)

Routine vaccination

- 2-dose series at age 12–15 months, age 4–6 years
- MMR or MMRV may be administered

Note: For dose 1 in children age 12–47 months, it is recommended to administer MMR and varicella vaccines separately. MMRV may be used if parents or caregivers express a preference.

Catch-up vaccination

- Unvaccinated children and adolescents: 2-dose series at least 4 weeks apart
- The maximum age for use of MMRV is 12 years.
- Minimum interval between *MMRV* doses: 3 months

Notes

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

Special situations

- **International travel**
  - **Infants age 6–11 months:** 1 dose before departure; revaccinate with 2-dose series at age 12–15 months (12 months for children in high-risk areas) and dose 2 as early as 4 weeks later.
  - **Unvaccinated children age 12 months or older:** 2-dose series at least 4 weeks apart before departure
- In mumps outbreak settings, for information about additional doses of MMR (including 3rd dose of MMR), see www.cdc.gov/mmwr/volumes/67/wr/mm6701a7.htm

Meningococcal serogroup A,C,W,Y vaccination (minimum age: 2 months [MenACWY-CRM, Menveo], 9 months [MenACWY-D, Menactra], 2 years [MenACWY-TT, MenQuadfi])

Routine vaccination

- 2-dose series at age 11–12 years; 16 years

Catch-up vaccination

- Age 13–15 years: 1 dose now and booster at age 16–18 years (minimum interval: 8 weeks)
- Age 16–18 years: 1 dose

Special situations

Anatomic or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:

- **Menveo®***
  - Dose 1 at age 2 months: 4-dose series (additional 3 doses at age 4, 6, and 12 months)
  - Dose 1 at age 3–6 months: 3- or 4-dose series (dose 2 [and dose 3 if applicable] at least 8 weeks after previous dose until a dose is received at age 7 months or older, followed by an additional dose at least 12 weeks later and after age 12 months)
  - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after age 12 months)
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart
- **Menactra®**
  - **Persistent complement component deficiency or complement inhibitor use:**
    - Age 9–23 months: 2-dose series at least 12 weeks apart
    - Age 24 months or older: 2-dose series at least 8 weeks apart
  - **Anatomic or functional asplenia, sickle cell disease, or HIV infection:**
    - **Age 9–23 months**: Not recommended
    - **Age 24 months or older**: 2-dose series at least 8 weeks apart
    - **Menactra®** must be administered at least 4 weeks after completion of PCV series.
- **MenQuadfi®**
  - Dose 1 at age 24 months or older: 2-dose series at least 8 weeks apart

Travel to countries with hyperendemic or epidemic meningococcal disease, including countries in the African meningitis belt or during the Hajj (www.cdc.gov/travel/):

- Children less than age 24 months:
  - **Menveo®* (age 2–23 months)**
    - Dose 1 at age 2 months: 4-dose series (additional 3 doses at age 4, 6, and 12 months)
    - Dose 1 at age 3–6 months: 3- or 4-dose series (dose 2 [and dose 3 if applicable] at least 8 weeks after previous dose until a dose is received at age 7 months or older, followed by an additional dose at least 12 weeks later and after age 12 months)
    - Dose 1 at age 7–23 months: 2-dose series (dose 2 at least 12 weeks after dose 1 and after age 12 months)
  - **Menactra® (age 9–23 months)**
    - 2-dose series (dose 2 at least 12 weeks after dose 1; dose 2 may be administered as early as 8 weeks after dose 1 in travelers)
- Children age 2 years or older: 1 dose Menveo®*, Menactra®, or MenQuadfi®

First-year college students who live in residential housing (if not previously vaccinated at age 16 years or older) or military recruits:

- 1 dose **Menveo®*, Menactra®,** or **MenQuadfi®**

Adolescent vaccination of children who received MenACWY prior to age 10 years:

- **Children for whom boosters are recommended** because of an ongoing increased risk of meningococcal disease (e.g., those with complement component deficiency, HIV, or asplenia): Follow the booster schedule for persons at increased risk.
- **Children for whom boosters are not recommended** (e.g., a healthy child who received a single dose for travel to a country where meningococcal disease is endemic): Administer MenACWY according to the recommended adolescent schedule with dose 1 at age 11–12 years and dose 2 at age 16 years.

**Menveo has two formulations: lyophilized and liquid. The liquid formulation should not be used before age 10 years.*

Note: Menactra® should be administered either before or at the same time as DTaP. MenACWY may be administered simultaneously with MenB vaccines if indicated, but at a different anatomic site, if feasible.

For MenACWY **booster dose recommendations** for groups listed under "Special situations" and in an outbreak setting and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm.

Meningococcal serogroup B vaccination (minimum age: 10 years [MenB-4C, Bexsero®; MenB-FHbp, Trumenba®])

Shared clinical decision-making

- **Adolescents not at increased risk** age 16–23 years (preferred age 16–18 years) based on shared clinical decision-making:
  - **Bexsero®:** 2-dose series at least 1 month apart
  - **Trumenba®:** 2-dose series at least 6 months apart (if dose 2 is administered earlier than 6 months, administer a 3rd dose at least 4 months after dose 2)

Special situations

Anatomic or functional asplenia (including sickle cell disease), persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:

- **Bexsero®:** 2-dose series at least 1 month apart
- **Trumenba®:** 3-dose series at 0, 1–2, 6 months (if dose 2 was administered at least 6 months after dose 1, dose 3 not needed; if dose 3 is administered earlier than 4 months after dose 2, a 4th dose should be administered at least 4 months after dose 3)

Note: Bexsero® and **Trumenba®** are not interchangeable; the same product should be used for all doses in a series.

For MenB **booster dose recommendations** for groups listed under "Special situations" and in an outbreak setting and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm.

Notes

Pneumococcal vaccination (minimum age: 6 weeks [PCV13], [PCV15], 2 years [PPSV23])

Routine vaccination with PCV

- 4-dose series at 2, 4, 6, 12–15 months

Catch-up vaccination with PCV

- Healthy children age 24–59 months with any incomplete* PCV series: 1 dose PCV
- For other catch-up guidance, see Table 2.

Note: PCV13 and PCV15 can be used interchangeably for children who are healthy or have underlying conditions. PCV15 is not indicated for children who have received 4 doses of PCV13 or another age appropriate complete PCV13 series.

Special situations

Underlying conditions below: When both PCV and PPSV23 are indicated, administer PCV first. PCV and PPSV23 should not be administered during the same visit.

Chronic heart disease (particularly cyanotic congenital heart disease and cardiac failure); chronic lung disease (including asthma treated with high-dose, oral corticosteroids); diabetes mellitus:

Age 2–5 years

- Any incomplete* series with:
  - 3 PCV doses: 1 dose PCV (at least 8 weeks after any prior PCV dose)
  - Less than 3 PCV doses: 2 doses PCV (8 weeks after the most recent dose and administered 8 weeks apart)
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks after completing all recommended PCV doses)

Age 6–18 years

- Any incomplete* series with PCV: no further PCV doses needed
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks after completing all recommended PCV doses)

Cerebrospinal fluid leak, cochlear implant:

Age 2–5 years

- Any incomplete* series with:
  - 3 PCV doses: 1 dose PCV (at least 8 weeks after any prior PCV dose)
  - Less than 3 PCV doses: 2 doses PCV (8 weeks after the most recent dose and administered 8 weeks apart)
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks after completing all recommended PCV doses)

Age 6–18 years

- No history of either PCV or PPSV23: 1 dose PCV, 1 dose PPSV23 at least 8 weeks later
- Any PCV but no PPSV23: 1 dose PPSV23 at least 8 weeks after the most recent dose of PCV
- PPSV23 but no PCV: 1 dose PCV at least 8 weeks after the most recent dose of PPSV23

Sickle cell disease and other hemoglobinopathies; anatomic or functional asplenia; congenital or acquired immunodeficiency; HIV infection; chronic renal failure; nephrotic syndrome; malignant neoplasms, leukemias, lymphomas, Hodgkin disease, and other diseases associated with treatment with immunosuppressive drugs or radiation therapy; solid organ transplantation; multiple myeloma:

Age 2–5 years

- Any incomplete* series with:
  - 3 PCV doses: 1 dose PCV (at least 8 weeks after any prior PCV dose)
  - Less than 3 PCV doses: 2 doses PCV (8 weeks after the most recent dose and administered 8 weeks apart)
- No history of PPSV23: 1 dose PPSV23 (at least 8 weeks after completing all recommended PCV doses) and a dose 2 of PPSV23 5 years later

Age 6–18 years

- No history of either PCV or PPSV23: 1 dose PCV, 2 doses PPSV23 (dose 1 of PPSV23 administered 8 weeks after PCV and dose 2 of PPSV23 administered at least 5 years after dose 1 of PPSV23)
- Any PCV but no PPSV23: 2 doses PPSV23 (dose 1 of PPSV23 administered 8 weeks after the most recent dose of PCV and dose 2 of PPSV23 administered at least 5 years after dose 1 of PPSV23)
- PPSV23 but no PCV: 1 dose PCV at least 8 weeks after the most recent PPSV23 dose and a dose 2 of PPSV23 administered 5 years after dose 1 of PPSV23 and at least 8 weeks after a dose of PCV

**Incomplete series* = Not having received all doses in either the recommended series or an age-appropriate catch-up series see Table 2 in ACIP pneumococcal recommendations at www.cdc.gov/mmwr/volumes/71/wr/mm7137a3.htm

For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app, which can be downloaded here: www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html

Poliovirus vaccination (minimum age: 6 weeks)

Routine vaccination

- 4-dose series at ages 2, 4, 6–18 months, 4–6 years; administer the final dose on or after age 4 years and at least 6 months after the previous dose.
- 4 or more doses of IPV can be administered before age 4 years when a combination vaccine containing IPV is used. However, a dose is still recommended on or after age 4 years and at least 6 months after the previous dose.

Catch-up vaccination

- In the first 6 months of life, use minimum ages and intervals only for travel to a polio-endemic region or during an outbreak.
- IPV is not routinely recommended for U.S. residents age 18 years or older.

Series containing oral polio vaccine (OPV), either mixed OPV-IPV or OPV-only series:

- Total number of doses needed to complete the series is the same as that recommended for the U.S. IPV schedule. See www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm?s_%20cid=mm6601a6_w.
- Only trivalent OPV (tOPV) counts toward the U.S. vaccination requirements.
  - Doses of OPV administered before April 1, 2016, should be counted (unless specifically noted as administered during a campaign).
  - Doses of OPV administered on or after April 1, 2016, should not be counted.
  - For guidance to assess doses documented as "OPV," see www.cdc.gov/mmwr/volumes/66/wr/mm6606a7.htm?s_cid=mm6606a7_w.
- For other catch-up guidance, see Table 2.

Special situations

- **Adolescents aged 18 years at increased risk of exposure to poliovirus with:**
  - No evidence of a complete polio vaccination series (i.e., at least 3 doses): administer remaining doses (1, 2, or 3 doses) to complete a 3-dose series
  - Evidence of completed polio vaccination series (i.e., at least 3 doses): may administer one lifetime IPV booster

For detailed information, see: www.cdc.gov/vaccines/vpd/polio/hcp/recommendations.html

Notes

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

Rotavirus vaccination
(minimum age: 6 weeks)

Routine vaccination

- **Rotarix®:** 2-dose series at age 2 and 4 months
- **RotaTeq®:** 3-dose series at age 2, 4, and 6 months
- If any dose in the series is either **RotaTeq®** or unknown, default to 3-dose series.

Catch-up vaccination

- Do not start the series on or after age 15 weeks, 0 days.
- The maximum age for the final dose is 8 months, 0 days.
- For other catch-up guidance, see Table 2.

Tetanus, diphtheria, and pertussis (Tdap) vaccination
(minimum age: 11 years for routine vaccination, 7 years for catch-up vaccination)

Routine vaccination

- **Adolescents age 11–12 years:** 1 dose Tdap
- **Pregnancy:** 1 dose Tdap during each pregnancy, preferably in early part of gestational weeks 27–36.
- Tdap may be administered regardless of the interval since the last tetanus- and diphtheria-toxoid-containing vaccine.

Catch-up vaccination

- **Adolescents age 13–18 years who have not received Tdap:** 1 dose Tdap, then Td or Tdap booster every 10 years
- **Persons age 7–18 years not fully vaccinated* with DTaP:** 1 dose Tdap as part of the catch-up series (preferably the first dose); if additional doses are needed, use Td or Tdap.
- **Tdap administered at age 7–10 years:**
  - **Children age 7–9 years** who receive Tdap should receive the routine Tdap dose at age 11–12 years.
  - **Children age 10 years** who receive Tdap do not need the routine Tdap dose at age 11–12 years.
- **DTaP inadvertently administered on or after age 7 years**:
  - **Children age 7–9 years**: DTaP may count as part of catch-up series. Administer routine Tdap dose at age 11–12 years.
  - **Children age 10–18 years**: Count dose of DTaP as the adolescent Tdap booster.
- For other catch-up guidance, see Table 2.

Special situations

- **Wound management** in persons age 7 years or older with history of 3 or more doses of tetanus-toxoid-containing vaccine: For clean and minor wounds, administer Tdap or Td if more than 10 years since last dose of tetanus-toxoid-containing vaccine; for all other wounds, administer Tdap or Td if more than 5 years since last dose of tetanus-toxoid-containing vaccine. Tdap is preferred for persons age 11 years or older who have not previously received Tdap or whose Tdap history is unknown. If a tetanus-toxoid-containing vaccine is indicated for a pregnant adolescent, use Tdap.
- For detailed information, see www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htm.

**Fully vaccinated* = 5 valid doses of DTaP OR 4 valid doses of DTaP if dose 4 was administered at age 4 years or older

Varicella vaccination
(minimum age: 12 months)

Routine vaccination

- 2-dose series at age 12–15 months, 4–6 years
- VAR or MMRV may be administered*
- Dose 2 may be administered as early as 3 months after dose 1 (a dose inadvertently administered after at least 4 weeks may be counted as valid)

**Note:* For dose 1 in children age 12–47 months, it is recommended to administer MMR and varicella vaccines separately. MMRV may be used if parents or caregivers express a preference.

Catch-up vaccination

- Ensure persons age 7–18 years without evidence of immunity (see *MMWR* at www.cdc.gov/mmwr/pdf/rr/rr5604.pdf) have a 2-dose series:
  - **Age 7–12 years**: Routine interval: 3 months (a dose inadvertently administered after at least 4 weeks may be counted as valid)
  - **Age 13 years and older**: Routine interval: 4–8 weeks (minimum interval: 4 weeks)
  - The maximum age for use of *MMRV* is 12 years.

Appendix Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

Guide to Contraindications and Precautions to Commonly Used Vaccines

Adapted from Table 4-1 in Advisory Committee on Immunization Practices (ACIP) General Best Practice Guidelines for Immunization: Contraindication and Precautions available at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html *and ACIP's Recommendations for the Prevention and Control of 2022-23 seasonal influenza with Vaccines available at* www.cdc.gov/mmwr/volumes/71/rr/rr7101a1.htm.

For COVID-19 vaccine contraindications and precautions see www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#contraindications

Vaccine	Contraindicated or Not Recommended[1]	Precautions[2]
Influenza, egg-based, inactivated injectable (IIV4)	• Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV of any valency) • Severe allergic reaction (e.g., anaphylaxis) to any vaccine component[3] (excluding egg)	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Moderate or severe acute illness with or without fever
Influenza, cell culture-based inactivated injectable [(ccIIV4), Flucelvax® Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) to any ccIIV of any valency, or to any component[3] of ccIIV4	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, RIV, or LAIV of any valency. If using ccIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. • Moderate or severe acute illness with or without fever
Influenza, recombinant injectable [(RIV4), Flublok® Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) to any RIV of any valency, or to any component[3] of RIV4	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, ccIIV, or LAIV of any valency. If using RIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. • Moderate or severe acute illness with or without fever
Influenza, live attenuated [LAIV4, Flumist® Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV of any valency) • Severe allergic reaction (e.g., anaphylaxis) to any vaccine component[3] (excluding egg) • Children age 2 –4 years with a history of asthma or wheezing • Anatomic or functional asplenia • Immunocompromised due to any cause including, but not limited to, medications and HIV infection • Close contacts or caregivers of severely immunosuppressed persons who require a protected environment • Pregnancy • Cochlear implant • Active communication between the cerebrospinal fluid (CSF) and the oropharynx, nasopharynx, nose, ear or any other cranial CSF leak • Children and adolescents receiving aspirin or salicylate-containing medications • Received influenza antiviral medications oseltamivir or zanamivir within the previous 48 hours, peramivir within the previous 5 days, or baloxavir within the previous 17 days	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Asthma in persons aged 5 years old or older • Persons with underlying medical conditions (other than those listed under contraindications) that might predispose to complications after wild-type influenza virus infection [e.g., chronic pulmonary, cardiovascular (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus)] • Moderate or severe acute illness with or without fever

1. When a contraindication is present, a vaccine should NOT be administered. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. Package inserts for U.S.-licensed vaccines are available at www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states

Appendix

Recommended Child and Adolescent Immunization Schedule for ages 18 years or younger, United States, 2023

Vaccine	Contraindicated or Not Recommended[1]	Precautions[2]
Dengue (DEN4CYD)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) • Lack of laboratory confirmation of a previous Dengue infection	• Pregnancy • HIV infection without evidence of severe immunosuppression • Moderate or severe acute illness with or without fever
Diphtheria, tetanus, pertussis (DTaP) Tetanus, diphtheria (DT)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For DTaP only: Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures) not attributable to another identifiable cause within 7 days of administration of previous dose of DTP or DTaP	• Guillain-Barré syndrome (GBS) within 6 weeks after previous dose of tetanus-toxoid–containing vaccine • History of Arthus-type hypersensitivity reactions after a previous dose of diphtheria-toxoid–containing or tetanus-toxoid–containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid-containing vaccine • For DTaP only: Progressive neurologic disorder, including infantile spasms, uncontrolled epilepsy, progressive encephalopathy; defer DTaP until neurologic status clarified and stabilized • Moderate or severe acute illness with or without fever
Haemophilus influenzae type b (Hib)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For Hiberix, ActHib, and PedvaxHIB only: History of severe allergic reaction to dry natural latex • Less than age 6 weeks	• Moderate or severe acute illness with or without fever
Hepatitis A (HepA)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including neomycin	• Moderate or severe acute illness with or without fever
Hepatitis B (HepB)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including yeast • *Pregnancy: Heplisav-B and PreHevbrio are not recommended due to lack of safety data in pregnant persons. Use other hepatitis B vaccines if HepB is indicated*[4].	• Moderate or severe acute illness with or without fever
Hepatitis A–Hepatitis B vaccine [HepA-HepB, (Twinrix®)]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including neomycin and yeast	• Moderate or severe acute illness with or without fever
Human papillomavirus (HPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • *Pregnancy: HPV vaccination not recommended.*	• Moderate or severe acute illness with or without fever
Measles, mumps, rubella (MMR) Measles, mumps, rubella, and varicella (MMRV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) • Pregnancy • Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent	• Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) • History of thrombocytopenia or thrombocytopenic purpura • Need for tuberculin skin testing or interferon-gamma release assay (IGRA) testing • Moderate or severe acute illness with or without fever • For MMRV only: Personal or family (i.e., sibling or parent) history of seizures of any etiology
Meningococcal ACWY (MenACWY) [MenACWY-CRM (Menveo®); MenACWY-D (Menactra®); MenACWY-TT (MenQuadfi®)]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For MenACWY-D and Men ACWY-CRM only: severe allergic reaction to any diphtheria toxoid– or CRM197–containing vaccine • For MenACWY-TT only: severe allergic reaction to a tetanus toxoid-containing vaccine	• For MenACWY-CRM only: Preterm birth if less than age 9 months • Moderate or severe acute illness with or without fever
Meningococcal B (MenB) [MenB-4C (Bexsero®); MenB-FHbp (Trumenba®)]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Pregnancy • For MenB-4C only: Latex sensitivity • Moderate or severe acute illness with or without fever
Pneumococcal conjugate (PCV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe allergic reaction (e.g., anaphylaxis) to any diphtheria-toxoid-containing vaccine or its component[3]	• Moderate or severe acute illness with or without fever
Pneumococcal polysaccharide (PPSV23)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Moderate or severe acute illness with or without fever
Poliovirus vaccine, inactivated (IPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Pregnancy • Moderate or severe acute illness with or without fever
Rotavirus (RV) [RV1 (Rotarix®), RV5 (RotaTeq®)]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe combined immunodeficiency (SCID) • History of intussusception	• Altered immunocompetence other than SCID • Chronic gastrointestinal disease • RV1 only: Spina bifida or bladder exstrophy • Moderate or severe acute illness with or without fever
Tetanus, diphtheria, and acellular pertussis (Tdap) Tetanus, diphtheria (Td)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For Tdap only: Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures) not attributable to another identifiable cause within 7 days of administration of previous dose of DTP, DTaP, or Tdap	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of tetanus-toxoid–containing vaccine • History of Arthus-type hypersensitivity reactions after a previous dose of diphtheria-toxoid–containing or tetanus-toxoid–containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid–containing vaccine • For Tdap only: Progressive or unstable neurological disorder, uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized • Moderate or severe acute illness with or without fever
Varicella (VAR)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) • Pregnancy • Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent	• Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) • Receipt of specific antiviral drugs (acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination (avoid use of these antiviral drugs for 14 days after vaccination) • Use of aspirin or aspirin-containing products • Moderate or severe acute illness with or without fever • If using MMRV, see MMR/MMRV for additional precautions

1. When a contraindication is present, a vaccine should NOT be administered. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. Package inserts for U.S.-licensed vaccines are available at www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states.
4. For information on the pregnancy exposure registries for persons who were inadvertently vaccinated with Heplisav-B or PreHevbrio while pregnant, please visit heplisavbpregnancyregistry.com/ or www.prehevbrio.com/#safety.

Catch-Up Guidance for Healthy[1] Children 4 Months through 4 Years of Age

Haemophilus influenzae type B Vaccines: ActHIB, Pentacel, Hiberix, or Unknown

The table below provides guidance for children whose vaccinations have been delayed. Start with the child's age and information on previous doses (previous doses must be documented and must meet minimum age requirements and minimum intervals between doses). Use this table in conjunction with table 2 of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, found at www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html.

IF current age is	AND # of previous doses is	AND		THEN	Next dose due
4 through 6 months	Unknown or 0	→		Give Dose 1 today	Give Dose 2 at least 4 weeks after Dose 1
	1	It has been at least 4 weeks since Dose 1		Give Dose 2 today	Give Dose 3 at least 4 weeks after Dose 2
		It has **not** been 4 weeks since Dose 1		No dose today	Give Dose 2 at least 4 weeks after Dose 1
	2	It has been at least 4 weeks since Dose 2		Give Dose 3 today	Give Dose 4 (**Final Dose**) at 12 months of age or older
		It has **not** been 4 weeks since Dose 2		No dose today	Give Dose 3 at least 4 weeks after Dose 2
7 through 11 months	Unknown or 0	→	→	Give Dose 1 today	Give Dose 2 at least 4 weeks after Dose 1
	1	It has been at least 4 weeks since Dose 1	→	Give Dose 2 today	IF Dose 1 was given **before** 7 months of age, give Dose 3 at least 4 weeks after Dose 2
					IF Dose 1 was given at 7 months of age or older, give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2 **and** no earlier than 12 months of age
		It has **not** been 4 weeks since Dose 1	→	No dose today	Give Dose 2 at least 4 weeks after Dose 1
	2	Dose 1 was given **before** 7 months of age	It has been at least 4 weeks since Dose 2	Give Dose 3 today	Give Dose 4 (**Final Dose**) at least 8 weeks after Dose 3 **and** no earlier than 12 months of age
			It has **not** been 4 weeks since Dose 2	No dose today	Give Dose 3 at least 4 weeks after Dose 2
		Dose 1 was given at 7 months of age or older	→	No dose today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2 **and** no earlier than 12 months of age

[1] Refer to notes of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021, for immunization guidance for children at increased risk for *Haemophilus influenzae* type b disease.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

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Catch-Up Guidance for Healthy[1] Children 4 Months through 4 Years of Age

Haemophilus influenzae type B Vaccines: ActHIB, Pentacel, Hiberix, or Unknown

IF current age is	AND # of previous doses is	AND	AND	AND	THEN	Next dose due
12 through 14 months	Unknown or 0	→	→	→	Give Dose 1 today	Give Dose 2 (**Final Dose**) at least 8 weeks after Dose 1
	1	Dose 1 was given **before** 12 months of age	It has been at least 4 weeks since Dose 1	→	Give Dose 2 today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2
			It has **not** been 4 weeks since Dose 1	→	No dose today	Give Dose 2 at least 4 weeks after Dose 1
		Dose 1 was given at 12 months of age or older	It has been at least 8 weeks since Dose 1	→	Give Dose 2 (**Final Dose**) today	**No additional doses needed**
			It has **not** been 8 weeks since Dose 1	→	No dose today	Give Dose 2 (**Final Dose**) at least 8 weeks after Dose 1
	2	Dose 1 was given **before** 12 months of age	It has been at least 8 weeks since Dose 2	→	Give Dose 3 (**Final Dose**) today	**No additional doses needed**
			It has **not** been 8 weeks since Dose 2	→	No dose today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2
		Dose 1 was given at 12 months of age or older	→	→	No dose today	**No additional doses needed**
	3	All doses were given **before** 12 months of age	→	It has been at least 8 weeks since Dose 3	Give Dose 4 (**Final Dose**) today	**No additional doses needed**
				It has **not** been 8 weeks since Dose 3	No dose today	Give Dose 4 (**Final Dose**) at least 8 weeks after Dose 3
		At least one dose was given at 12 months of age or older	→	→	No dose today	**No additional doses needed**

[1] Refer to notes of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021, for children at increased risk for *Haemophilus influenzae* type b disease.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

Catch-Up Guidance for Healthy[1] Children 4 Months through 4 Years of Age

Haemophilus influenzae type B Vaccines: ActHIB, Pentacel, Hiberix, or Unknown

IF current age is	AND # of previous doses is	AND	AND	AND	THEN	Next dose due
15 through 59 months	Unknown or 0	→	→	→	Give Dose 1 (**Final Dose**) today	**No additional doses needed**
	1	Dose 1 was given **before** 12 months of age	→	→	Give Dose 2 (**Final Dose**) today	**No additional doses needed**
		Dose 1 was given at 12 through 14 months of age	It has been at least 8 weeks since Dose 1	→	Give Dose 2 (**Final Dose**) today	**No additional doses needed**
			It has **not** been 8 weeks since Dose 1	→	No dose today	Give Dose 2 (**Final Dose**) at least 8 weeks after Dose 1
		Dose 1 was given at 15 months of age or older	→	→	No dose today	**No additional doses needed**
	2	Dose 1 was given **before** 12 months of age	Dose 2 was given **before** 15 months of age	It has been at least 8 weeks since Dose 2	Give Dose 3 (**Final Dose**) today	**No additional doses needed**
				It has **not** been 8 weeks since Dose 2	No dose today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2
			Dose 2 was given at 15 months of age or older	→	No dose today	**No additional doses needed**
		Dose 1 was given at 12 months of age or older	→	→	No dose today	**No additional doses needed**
	3	Dose 3 was given **before** 15 months of age	All doses were given **before** 12 months of age	→	Give Dose 4 (**Final Dose**) today	**No additional doses needed**
			At least one dose was given at 12 months of age or older	→	No dose today	**No additional doses needed**
		Dose 3 was given at 15 months of age or older	→	→	No dose today	**No additional doses needed**

[1] Refer to notes of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021, for immunization guidance for children at increased risk for *Haemophilus influenzae* type b disease.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

Catch-Up Guidance for Healthy[1] Children 4 Months through 4 Years of Age

Haemophilus influenzae type b Vaccines: PedvaxHIB Vaccine Only

The table below provides guidance for children whose vaccinations have been delayed. Start with the child's age and information on previous doses (previous doses must be documented and must meet minimum age requirements and minimum intervals between doses). Use this table in conjunction with table 2 of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, found at www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html.

IF current age is	AND # of previous doses is	AND	AND	THEN	Next dose due
4 through 6 months	0	→	→	Give Dose 1 today	Give Dose 2 at least 4 weeks after Dose 1
	1	→	It has been at least 4 weeks since Dose 1	Give Dose 2 today	Give Dose 3 (**Final Dose**) at 12 months of age or older
		→	It has **not** been 4 weeks since Dose 1	No dose today	Give Dose 2 at least 4 weeks after Dose 1
7 through 11 months	0	→	→	Give Dose 1 today	Give Dose 2 at least 4 weeks after Dose 1
	1	→	It has been at least 4 weeks since Dose 1	Give Dose 2 today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2 **and** at 12 months of age or older
		→	It has **not** been 4 weeks since Dose 1	No dose today	Give Dose 2 at least 4 weeks after Dose 1
12 through 14 months	0	→	→	Give Dose 1 today	Give Dose 2 (**Final Dose**) at least 8 weeks after Dose 1
	1	Dose 1 was given **before** 12 months of age	It has been at least 4 weeks since Dose 1	Give Dose 2 today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2
			It has **not** been 4 weeks since Dose 1	No dose today	Give Dose 2 at least 4 weeks after Dose 1
		Dose 1 was given at 12 months of age or older	It has been at least 8 weeks since Dose 1	Give Dose 2 (**Final Dose**) today	**No additional doses needed**
			It has **not** been 8 weeks since Dose 1	No dose today	Give Dose 2 (**Final Dose**) at least 8 weeks after Dose 1
	2	Dose 1 was given **before** 12 months of age	It has been at least 8 weeks since Dose 2	Give Dose 3 (**Final Dose**) today	**No additional doses needed**
			It has **not** been 8 weeks since Dose 2	No dose today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2
		Dose 1 was given at 12 months of age or older	→	No dose today	**No additional doses needed**

[1] Refer to notes of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021, for immunization guidance for children at increased risk for *Haemophilus influenzae* type b disease.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

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Catch-Up Guidance for Healthy[1] Children 4 Months through 4 Years of Age

Haemophilus influenzae type b Vaccines: PedvaxHIB Vaccine Only

IF current age is	AND # of previous doses is	AND	AND	AND	THEN	Next dose due
15 through 59 months	0	→	→	→	Give Dose 1 (**Final Dose**) today	**No additional doses needed**
	1	Dose 1 was given **before** 12 months of age	→	→	Give Dose 2 (**Final Dose**) today	**No additional doses needed**
		Dose 1 was given at 12 through 14 months of age	It has been at least 8 weeks since Dose 1	→	Give Dose 2 (**Final Dose**) today	**No additional doses needed**
			It has **not** been 8 weeks since Dose 1	→	No dose today	Give Dose 2 (**Final Dose**) at least 8 weeks after Dose 1
		Dose 1 was given at 15 months of age or older	→	→	No dose today	**No additional doses needed**
	2	Dose 1 was given **before** 12 months of age	Dose 2 was given **before** 15 months of age	It has been at least 8 weeks since Dose 2	Give Dose 3 (**Final Dose**) today	**No additional doses needed**
				It has **not** been 8 weeks since Dose 2	No dose today	Give dose 3 (**Final Dose**) at least 8 weeks after Dose 2
			Dose 2 was given at 15 months of age or older	→	No dose today	**No additional doses needed**
		Dose 1 was given at 12 months or older	→	→	No dose today	**No additional doses needed**

[1] Refer to notes of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021, for immunization guidance for children at increased risk for *Haemophilus influenzae* type b disease.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

Catch-Up Guidance for Healthy[1] Children 4 Months through 4 Years of Age

Pneumococcal Conjugate Vaccine: PCV

The table below provides guidance for children whose vaccinations have been delayed. Start with the child's age and information on previous doses (previous doses must be documented and must meet minimum age requirements and minimum intervals between doses). Use this table in conjunction with table 2 of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, found at www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html.

IF current age is	AND # of previous doses is	AND		THEN	Next dose due
4 through 6 months	0 or unknown	→	→	Give Dose 1 today	Give Dose 2 at least 4 weeks after Dose 1
	1	→	It has been at least 4 weeks since Dose 1	Give Dose 2 today	Give Dose 3 at least 4 weeks after Dose 2
		→	It has **not** been at least 4 weeks since Dose 1	No dose today	Give Dose 2 at least 4 weeks after Dose 1
	2	→	It has been at least 4 weeks since Dose 2	Give Dose 3 today	Give Dose 4 (**Final Dose**) at 12 months of age or older
		→	It has **not** been at least 4 weeks since Dose 2	No dose today	Give Dose 3 at least 4 weeks after Dose 2
7 through 11 months	0	→	→	Give Dose 1 today	Give Dose 2 at least 4 weeks after Dose 1
	1	Dose 1 was given **before** 7 months of age	It has been at least 4 weeks since Dose 1	Give Dose 2 today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2 **and** at 12 months of age or older
			It has **not** been 4 weeks since Dose 1	No dose today	Give Dose 2 at least 4 weeks after Dose 1
		Dose 1 was given at 7 months or older	It has been at least 4 weeks since Dose 1	Give Dose 2 today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2 **and** at 12 months of age or older
			It has **not** been 4 weeks since Dose 1	No dose today	Give Dose 2 at least 4 weeks after Dose 1
	2	Dose 2 was given **before** 7 months of age	It has been at least 4 weeks since Dose 2	Give Dose 3 today	Give Dose 4 (**Final Dose**) at least 8 weeks after Dose 3 **and** at 12 months of age or older
			It has **not** been 4 weeks since Dose 2	No dose today	Give Dose 3 at least 4 weeks after Dose 2
		Dose 2 was given at 7 months or older	→	No dose today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2 **and** at 12 months of age or older

[1] Refer to the notes of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021, for immunization guidance for children at increased risk for pneumococcal disease.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf.

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Catch-Up Guidance for Healthy[1] Children 4 Months through 4 Years of Age

Pneumococcal Conjugate Vaccine: PCV

IF current age is	AND # of previous doses is	AND	AND	THEN	Next dose due
12 through 23 months	0 or unknown	→	→	Give Dose 1 today	Give Dose 2 (**Final Dose**) at least 8 weeks after Dose 1
	1	Dose 1 was given **before** 12 months of age	It has been at least 4 weeks since Dose 1	Give Dose 2 today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2
			It has **not** been 4 weeks since Dose 1	No dose today	Give Dose 2 at least 4 weeks after Dose 1
		Dose 1 was given at 12 months of age or older	It has been at least 8 weeks since Dose 1	Give Dose 2 (**Final Dose**) today	**No additional doses needed**
			It has **not** been 8 weeks since Dose 1	No dose today	Give Dose 2 (**Final Dose**) at least 8 weeks after Dose 1
	2	Both doses were given **before** 12 months of age	It has been at least 8 weeks since Dose 2	Give Dose 3 (**Final Dose**) today	**No additional doses needed**
			It has **not** been 8 weeks since Dose 2	No dose today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2
		At least one dose was given at 12 months or older	It has been at least 8 weeks since Dose 2	Give Dose 3 (**Final Dose**) today	**No additional doses needed**
			It has **not** been 8 weeks since Dose 2	No dose today	Give Dose 3 (**Final Dose**) at least 8 weeks after Dose 2
		Both doses were given at 12 months or older[2]	→	No dose today	**No additional doses needed**
	3	All doses were given **before** 12 months of age	It has been at least 8 weeks since Dose 3	Give Dose 4 (**Final Dose**) today	**No additional doses needed**
			It has **not** been 8 weeks since Dose 3	No dose today	Give Dose 4 (**Final Dose**) at least 8 weeks after Dose 3
		1 or more doses were given at 12 months of age or older	→	No dose today	**No additional doses needed**

[1] Refer to the notes of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021, for immunization guidance for children at increased risk for pneumococcal disease.

[2] Separated by at least 8 weeks.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf.

Catch-Up Guidance for Healthy[1] Children 4 Months through 4 Years of Age

Pneumococcal Conjugate Vaccine: PCV

IF current age is	AND # of previous doses is	AND	AND	AND	THEN	Next dose due
24 through 59 months	0	→	→	→	Give Dose 1 today	**No additional doses needed**
	1	Dose 1 was given **before** 1st birthday	→	→	Give Dose 2 (**Final Dose**) today	**No additional doses needed**
		Dose 1 was given **after** 1st birthday	Dose 1 was given **before** 2nd birthday	It has been at least 8 weeks since Dose 1	Give Dose 2 (**Final Dose**) today	**No additional doses needed**
				It has **not** been at least 8 weeks since Dose 1	No dose today	Give Dose 2 (**Final Dose**) at least 8 weeks after Dose 1
			Dose 1 was given **after** 2nd birthday	→	No dose today	**No additional doses needed**
	2	Dose 1 was given **before** 12 months of age	Dose 2 was given **before** 1st birthday	→	Give Dose 3 (**Final Dose**) today	**No additional doses needed**
			Dose 2 was given **after** 1st birthday	Dose 2 was given **before** 2nd birthday	Give Dose 3 (**Final Dose**) today	**No additional doses needed**
				Dose 2 was given **after** 2nd birthday	No dose today	**No additional doses needed**
		Dose 1 was given **after** 12 months of age	→	→	No dose today	**No additional doses needed**
	3	All 3 doses were given **before** 12 months of age	→	→	Give Dose 4 (**Final Dose**) today	**No additional doses needed**
		1 or more doses were given at 12 months or older	→	→	No dose today	**No additional doses needed**

[1] Refer to the notes of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021, for immunization guidance for children at increased risk for pneumococcal disease.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger–United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf.

Catch-Up Guidance for Children 7 through 9 Years of Age

Tetanus-, Diphtheria-, and Pertussis-Containing Vaccines: Tdap/Td[1]

The table below provides guidance for children whose vaccinations have been delayed. Start with the child's age and information on previous doses (previous doses must be documented and must meet minimum age requirements and minimum intervals between doses). Use this table in conjunction with table 2 of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, found at www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html.

IF current age is	AND # of previous doses of DTaP, DT, Td, or Tdap is	AND	AND	AND	THEN	Next dose due
7 through 9 years[1]	Unknown or 0	→	→	→	Give Dose 1 (Tdap) today	Give Dose 2 (Td or Tdap) at least 4 weeks after Dose 1
	1	Dose 1 was given **before** 12 months of age	→	→	Give Dose 2 (Tdap) today	Give Dose 3 (Td or Tdap) at least 4 weeks after Dose 2
		Dose 1 was given at 12 months of age or older	It has been at least 4 weeks since Dose 1	Dose 1 was Tdap	Give Dose 2 (Td or Tdap) today	Give Dose 3 (Td or Tdap) at least 6 calendar months after Dose 2
				Dose 1 was **not** Tdap	Give Dose 2 (Tdap) today	
			It has **not** been 4 weeks since Dose 1	Dose 1 was Tdap	No dose today	Give Dose 2 (Td or Tdap) at least 4 weeks after Dose 1
				Dose 1 was **not** Tdap		Give Dose 2 (Tdap) at least 4 weeks after Dose 1
	2	Dose 1 was given **before** 12 months of age	It has been at least 4 weeks since Dose 2	Dose 2 was Tdap[1]	Give Dose 3 (Td or Tdap) today	Give Dose 4 (Td or Tdap) at least 6 calendar months after Dose 3
				No dose was Tdap	Give Dose 3 (Tdap) today	
			It has **not** been 4 weeks since Dose 2	Dose 2 was Tdap	No dose today	Give Dose 3 (Td or Tdap) at least 4 weeks after Dose 2
				No dose was Tdap		Give Dose 3 (Tdap) at least 4 weeks after Dose 2
		Dose 1 was given at 12 months of age or older	It has been at least 6 calendar months since Dose 2	Any dose was Tdap[1]	Give Dose 3 (Td or Tdap) today	Give Tdap at 11–12 years of age[1,2]
				No dose was Tdap	Give Dose 3 (Tdap) today	
			It has **not** been 6 calendar months since Dose 2	Any dose was Tdap[1]	No dose today	Give Dose 3 (Td or Tdap) at least 6 calendar months after Dose 2[1]
				No dose was Tdap		Give Dose 3 (Tdap) at least 6 calendar months after Dose 2

[1]For persons 7–9 years of age who receive a dose of Tdap, the routine adolescent Tdap dose should be administered at age 11–12.

[2]Tdap may be administered regardless of the interval since the last tetanus- and diphtheria-toxoid-containing vaccine.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger—United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

U.S. Department of Health and Human Services
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Catch-Up Guidance for Children 7 through 9 Years of Age

Tetanus-, Diphtheria-, and Pertussis-Containing Vaccines: Tdap/Td[1]

IF current age is	AND # of previous doses of DTaP, DT, Td, or Tdap is	AND	AND	AND	THEN	Next dose due
7 through 9 years[1]	3	Dose 1 was given **before** 12 months of age	It has been at least 6 calendar months since Dose 3	Any dose was Tdap[1]	Give Dose 4 (Td or Tdap) today	Give Tdap at 11–12 years of age[1,2]
				No dose was Tdap	Give Dose 4 (Tdap) today	
			It has **not** been 6 calendar months since Dose 3	Any dose was Tdap[1]	No dose today	Give Dose 4 (Td or Tdap) at least 6 calendar months after Dose 3[1]
				No dose was Tdap		Give Dose 4 (Tdap) at least 6 calendar months after Dose 3[1]
		Dose 1 was given at 12 months of age or older	No dose was Tdap	→	Give Dose 4 (Tdap[2]) today	Give Tdap at 11–12 years of age[1,2]
			Any dose was Tdap	→	No dose today	
	4	→	Dose of DTaP or Tdap given after 4th birthday	→	No dose today	Give Tdap at 11–12 years of age[1,2]
			No DTaP or Tdap given after 4th birthday	→	Give a dose of Tdap today	Give Tdap at 11–12 years of age[1,2]

[1]For persons 7–9 years of age who receive a dose of Tdap, the routine adolescent Tdap dose should be administered at age 11–12.

[2]Tdap may be administered regardless of the interval since the last tetanus- and diphtheria-toxoid-containing vaccine.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger—United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

Catch-Up Guidance for Children 10 through 18 Years of Age

Tetanus-, Diphtheria-, and Pertussis-Containing Vaccines: Tdap/Td

The table below provides guidance for children whose vaccinations have been delayed. Start with the child's age and information on previous doses (previous doses must be documented and must meet minimum age requirements and minimum intervals between doses). Use this table in conjunction with table 2 of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, found at www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html.

IF current age is	AND # of previous doses of DTaP, DT, Td, or Tdap is	AND	AND	AND	THEN	Next dose due
10 through 18 years	Unknown or 0	→	→	→	Give Dose 1 (Tdap) today	Give Dose 2 (Td or Tdap) at least 4 weeks after Dose 1
	1	Dose 1 was given **before** 12 months of age	→	→	Give Dose 2 (Tdap) today	Give Dose 3 (Td or Tdap) at least 4 weeks after Dose 2
		Dose 1 was given at 12 months of age or older	It has been at least 4 weeks since Dose 1	Dose 1 was Tdap	Give Dose 2 (Td or Tdap) today	Give Dose 3 (Td or Tdap) at least 6 calendar months after Dose 2
				Dose 1 was **not** Tdap	Give Dose 2 (Tdap) today	
			It has **not** been 4 weeks since Dose 1	Dose 1 was Tdap	No dose today	Give Dose 2 (Td or Tdap) at least 4 weeks after Dose 1
				Dose 1 was **not** Tdap	No dose today	Give Dose 2 (Tdap) at least 4 weeks after Dose 1
	2	Dose 1 was given **before** 12 months of age	It has been at least 4 weeks since Dose 2	Any dose was Tdap[1]	Give Dose 3 (Td or Tdap) today[2]	Give Dose 4 (Td or Tdap) at least 6 calendar months after Dose 3
				No dose was Tdap[3]	Give Dose 3 (Tdap) today	
			It has **not** been 4 weeks since Dose 2	Any dose was Tdap[1]	No dose today	Give Dose 3 (Td or Tdap) at least 4 weeks after Dose 2[2]
				No dose was Tdap[3]	No dose today	Give Dose 3 (Tdap) at least 4 weeks after Dose 2
		Dose 1 was given at 12 months of age or older	It has been at least 6 calendar months since Dose 2	Any dose was Tdap[1]	Give Dose 3 (Td or Tdap) today[2]	Give Td or Tdap 10 years after Dose 3
				No dose was Tdap[2]	Give Dose 3 (Tdap) today	
			It has **not** been 6 calendar months since Dose 2	Any dose was Tdap[1]	No dose today	Give Dose 3 (Td or Tdap) at least 6 calendar months after Dose 2[2]
				No dose was Tdap[3]	No dose today	Give Dose 3 (Tdap) at least 6 calendar months after Dose 2

[1]Given at 10 years of age or older.

[2]If the previous Tdap dose(s) was administered before the 10th birthday, then a dose of Tdap is recommended now.

[3]Or Tdap administered at 9 years of age or younger.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger—United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Catch-Up Guidance for Children 10 through 18 Years of Age

Tetanus-, Diphtheria-, and Pertussis-Containing Vaccines: Tdap/Td

IF current age is	AND # of previous doses of DTaP, DT, Td, or Tdap is	AND	AND	AND	THEN	Next dose due
10 through 18 years	3	Dose 1 was given **before** 12 months of age	It has been at least 6 calendar months since Dose 3	Any dose was Tdap[1]	Give Dose 4 (Td or Tdap) today[2]	Give Td or Tdap 10 years after Dose 4
				No dose was Tdap[3]	Give Dose 4 (Tdap) today	
			It has **not** been 6 calendar months since Dose 3	Any dose was Tdap[1]	No dose today	Give Dose 4 (Td or Tdap) at least 6 calendar months after Dose 3[2]
				No dose was Tdap[3]	No dose today	Give Dose 4 (Tdap) at least 6 calendar months after Dose 3
		Dose 1 was given at 12 months of age or older	No dose was Tdap[1]	→	Give Dose 4 (Tdap) today	Give Td or Tdap 10 years after Dose 4
			Any dose was Tdap[2]	→	No dose today	Give Td or Tdap 10 years after Dose 3
	4	→	No Tdap was given after 7th birthday	→	Give a dose of Tdap today[4]	Give Td or Tdap 10 years after Tdap dose
			Any dose of Tdap was given at age 7 years or older[1]	No Tdap was given after 10th birthday		
				Tdap was given after 10th birthday	No dose today	Give Td or Tdap 10 years after Dose 4

[1]Given at 10 years of age or older.

[2]If the previous Tdap dose(s) was administered before the 10th birthday, then a dose of Tdap is recommended now.

[3]Or Tdap administered at 9 years of age or younger.

[4]The preferred age at administration for this dose is 11–12 years. However, if Tdap is administered at age 10 years, the Tdap dose may count as the adolescent Tdap dose.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger—United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

Catch-Up Guidance for Children 4 Months through 6 Years of Age

Diphtheria-, Tetanus-, and Pertussis-Containing Vaccines: DTaP/DT[1]

The table below provides guidance for children whose vaccinations have been delayed. Start with the child's age and information on previous doses (previous doses must be documented and must meet minimum age requirements and minimum intervals between doses). Use this table in conjunction with table 2 of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, found at www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html.

IF current age is	AND # of previous doses of DTaP or DT is	AND	THEN	Next dose due
4 months through 11 months	Unknown or 0	→	Give Dose 1 (DTaP) today	Give Dose 2 (DTaP) at least 4 weeks after Dose 1
	1	It has been at least 4 weeks since Dose 1	Give Dose 2 (DTaP) today	Give Dose 3 (DTaP) at least 4 weeks after Dose 2
		It has **not** been at least 4 weeks since Dose 1	No dose today	Give Dose 2 (DTaP) at least 4 weeks after Dose 1
	2	It has been at least 4 weeks since Dose 2	Give Dose 3 (DTaP) today	Give Dose 4 (DTaP) at least 6 calendar months after Dose 3 **and** at 15 months of age or older[2]
		It has **not** been at least 4 weeks since Dose 2	No dose today	Give Dose 3 (DTaP) at least 4 weeks after Dose 2
1 through 3 years	Unknown or 0	→	Give Dose 1 (DTaP) today	Give Dose 2 (DTaP) at least 4 weeks after Dose 1
	1	It has been at least 4 weeks since Dose 1	Give Dose 2 (DTaP) today	Give Dose 3 (DTaP) at least 4 weeks after Dose 2
		It has **not** been 4 weeks since Dose 1	No dose today	Give Dose 2 (DTaP) at least 4 weeks after Dose 1
	2	It has been at least 4 weeks since Dose 2	Give Dose 3 (DTaP) today	Give Dose 4 (DTaP) at least 6 calendar months after Dose 3
		It has **not** been 4 weeks since Dose 2	No dose today	Give Dose 3 (DTaP) at least 4 weeks after Dose 2
	3	It has been at least 6 calendar months since Dose 3	If 12 through 14 months of age, no dose today[2]	Give Dose 4 (DTaP) at 15 through 18 months of age
			If 15 months of age or older, give Dose 4 (DTaP) today	Give Dose 5 (DTaP) at least 6 months after Dose 4 **and** at 4 through 6 years of age
		It has **not** been 6 calendar months since Dose 3	No dose today	Give Dose 4 (DTaP) at least 6 months after Dose 3

[1]Vaccine information: DTaP–Administer to children 6 weeks through 6 years of age without a contraindication or precaution to diphtheria, tetanus, or pertussis vaccine. DTaP products include Daptacel, Kinrix, Infanrix, Pediarix, Pentacel, and Quadracel. Use the correct product based on the approved age indications. DT–Administer to children 6 weeks through 6 years of age with a contraindication to pertussis vaccine.

[2]The fourth dose may be administered as early as age 12 months, provided at least 6 months have elapsed since the third dose.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger—United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

Revised February 2021

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Catch-Up Guidance for Children 4 Months through 6 Years of Age

Diphtheria-, Tetanus-, and Pertussis-Containing Vaccines: DTaP/DT[1]

IF current age is	AND # of previous doses of DTaP or DT is[1]	AND	AND	THEN	Next dose due
4 through 6 years	Unknown or 0	→	→	Give Dose 1 (DTaP) today	Give Dose 2 (DTaP) at least 4 weeks after Dose 1
	1	It has been at least 4 weeks since Dose 1	→	Give Dose 2 (DTaP) today	Give Dose 3 (DTaP) at least 4 weeks after Dose 2
		It has **not** been 4 weeks since Dose 1	→	No dose today	Give Dose 2 (DTaP) at least 4 weeks after Dose 1
	2	It has been at least 4 weeks since Dose 2	→	Give Dose 3 (DTaP) today	Give Dose 4 (DTaP) at least 6 calendar months after Dose 3
		It has **not** been at least 4 weeks since Dose 2	→	No dose today	Give Dose 3 (DTaP) at least 4 weeks after Dose 2
	3	It has been at least 6 calendar months since Dose 3	→	Give Dose 4 (DTaP) today	Give Tdap at 11 to 12 years of age
		It has **not** been at least 6 calendar months since Dose 3	→	No dose today	Give Dose 4 (DTaP) at least 6 calendar months after Dose 3
	4	All doses were given prior to the 4th birthday	It has **not** been at least 6 months since Dose 4	No dose today	Give Dose 5 (DTaP) at least 6 calendar months after Dose 4
			It has been at least 6 months since Dose 4	Give Dose 5 (DTaP) today	Give Tdap at 11 to 12 years of age
		At least one dose was given at/after the 4th birthday	→	No dose today	

[1]Vaccine information: DTaP—Administer to children 6 weeks through 6 years of age without a contraindication or precaution to diphtheria, tetanus, or pertussis vaccine. DTaP products include Daptacel, Kinrix, Infanrix, Pediarix, Pentacel, and Quadracel. Use the correct product based on the approved age indications. DT—Administer to children 6 weeks through 6 years of age with a contraindication to pertussis vaccine.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger—United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

Revised February 2021

Catch-Up Guidance for Children 4 Months through 17 Years of Age

Inactivated Polio Vaccine (IPV)

The table below provides guidance for children whose vaccinations have been delayed. Start with the child's age and information on previous doses (previous doses must be documented and must meet minimum age requirements and minimum intervals between doses). Use this table in conjunction with table 2 of the Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger, found at www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html.

IF current age is	AND # of previous doses[1] is	AND		THEN	Next dose due[2]
4 through 18 months	Unknown or 0	→		Give Dose 1 today	Give Dose 2 at least 4 weeks after Dose 1
	1	It has been at least 4 weeks since Dose 1		Give Dose 2 today	Give Dose 3 at least 4 weeks after Dose 2 **and** at 6 months of age or older
		It has **not** been at least 4 weeks since Dose 1		No dose today	Give Dose 2 at least 4 weeks after Dose 1
	2	It has been at least 4 weeks since Dose 2	Child is 6 months of age or older	Give Dose 3 today	Give Dose 4 (**Final Dose**) at 4 through 6 years of age
			Child is younger than 6 months of age	No dose today	Give Dose 3 at 6 months of age
		It has **not** been at least 4 weeks since Dose 2	→	No dose today	Give Dose 3 at least 4 weeks after Dose 2 **and** at 6 months of age or older
19 months through 3 years	Unknown or 0	→		Give Dose 1 today	Give Dose 2 at least 4 weeks after Dose 1
	1	It has been at least 4 weeks since Dose 1		Give Dose 2 today	Give Dose 3 at least 4 weeks after Dose 2
		It has **not** been at least 4 weeks since Dose 1		No dose today	Give Dose 2 at least 4 weeks after Dose 1
	2	It has been at least 4 weeks since Dose 2		Give Dose 3 today	Give Dose 4 (**Final Dose**) at least 6 months after Dose 3 and at 4 through 6 years of age
		It has **not** been 4 weeks since Dose 2		No dose today	Give Dose 3 at least 4 weeks after Dose 2

[1] Series containing oral polio vaccine (OPV), either mixed OPV-IPV or OPV only: Total number of doses needed to complete the series is the same as that recommended for the U.S. IPV schedule. www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm

[2] Next dose due is not the final dose in the series unless explicitly stated.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger—United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Catch-Up Guidance for Children 4 Months through 17 Years of Age

Inactivated Polio Vaccine (IPV)

IF current age is	AND # of previous doses[1] is	AND			THEN	Next dose due[2]
4 through 17 years	Unknown or 0	→			Give Dose 1 today	Give Dose 2 at least 4 weeks after Dose 1
	1	It has been at least 4 weeks since Dose 1			Give Dose 2 today	Give Dose 3 (**Final Dose**) at least 6 months after Dose 2
		It has **not** been 4 weeks since Dose 1			No dose today	Give Dose 2 at least 4 weeks after Dose 1
	2	It has been at least 6 months since Dose 2			Give Dose 3 (**Final Dose**) today	**No additional doses needed**
		It has **not** been 6 months since Dose 2			No dose today	Give Dose 3 (**Final Dose**) at least 6 months after Dose 2
	3	Dose 3 was given before 4 years of age	It has been at least 6 months since Dose 3	→	Give Dose 4 (**Final dose**) today	**No additional doses needed**
			It has **not** been at least 6 months since Dose 3	→	No dose today	Give Dose 4 **(Final Dose)** at least 6 months after Dose 3
		Dose 3 was given at 4 years of age or older	Dose 3 was given at least 6 months from previous dose	→	No dose today	**No additional doses needed**
			Dose 3 was **not** given at least 6 months from previous dose	It has been at least 6 months since Dose 3	Give Dose 4 (**Final dose**) today	**No additional doses needed**
				It has not been at least 6 months since Dose 3	No dose today	Give Dose 4 **(Final Dose)** at least 6 months after Dose 3

[1] Series containing oral polio vaccine (OPV), either mixed OPV-IPV or OPV only: Total number of doses needed to complete the series is the same as that recommended for the U.S. IPV schedule. www.cdc.gov/mmwr/volumes/66/wr/mm6601a6.htm

[2] Next dose due is not the final dose in the series unless explicitly stated.

Reference: Recommended Child and Adolescent Immunization Schedule for Ages 18 Years or Younger—United States, 2021. www.cdc.gov/vaccines/schedules/downloads/child/0-18yrs-child-combined-schedule.pdf

Indiana 2023-2024 Required and Recommended School Immunizations (Proposed)

Grade	Required		Recommended
Pre-K	3 Hepatitis B 4 DTaP (Diphtheria, Tetanus & Pertussis) 3 Polio	1 Varicella (Chickenpox) 1 MMR (Measles, Mumps & Rubella) 2 Hepatitis A	Annual influenza
K-5th grade	3 Hepatitis B 5 DTaP 4 Polio	2 Varicella 2 MMR 2 Hepatitis A	Annual influenza COVID-19
6th-11th grade	3 Hepatitis B 5 DTaP 4 Polio 2 Varicella	2 MMR 2 Hepatitis A 1 MCV4 (Meningococcal) 1 Tdap (Tetanus, Diphtheria & Pertussis)	Annual influenza 2/3 HPV (Human papillomavirus) COVID-19
12th grade	3 Hepatitis B 5 DTaP 4 Polio 2 Varicella	2 MMR 2 Hepatitis A 2 MCV4 1 Tdap	Annual influenza 2/3 HPV 2 MenB (Meningococcal) COVID-19

HepB: The minimum age for the 3rd dose of Hepatitis B is 24 weeks of age.

DTaP: 4 doses of DTaP/DTP/DT are acceptable if 4th dose was administered on or after child's 4th birthday.

Polio*: 3 doses of Polio are acceptable for all grade levels if the 3rd dose was given on or after the 4th birthday and at least 6 months after the previous dose.
*For students in grades K-10, the final dose must be administered on or after the 4th birthday and be administered at least 6 months after the previous dose.

Varicella: Physician documentation of disease history, including month and year, is proof of immunity for children entering preschool through 12th grade. Parent report of disease history is not acceptable.

Tdap: There is no minimum interval from the last Td dose.

MCV4: Individuals who receive dose 1 on or after the 16th birthday only need 1 dose of MCV4.

Hepatitis A: The minimum interval between 1st and 2nd dose is 6 calendar months. 2 doses are required for all grades Pre-K through 12.

COVID-19: COVID-19 vaccine is recommended for all students five years of age and older per CDC and FDA's Emergency Use Authorization. ***Review required after FDA full approval.***

Indiana Department of Health
Immunization Division

(800) 701-0704

November 2021

Recommended Adult Immunization Schedule
for ages 19 years or older

UNITED STATES
2023

How to use the adult immunization schedule

1 Determine recommended vaccinations by age **(Table 1)**

2 Assess need for additional recommended vaccinations by medical condition or other indication **(Table 2)**

3 Review vaccine types, dosing frequencies and intervals, and considerations for special situations **(Notes)**

4 Review contraindications and precautions for vaccine types **(Appendix)**

Vaccines in the Adult Immunization Schedule*

Vaccine	Abbreviation(s)	Trade name(s)
COVID-19 vaccine	1vCOV-mRNA	Comirnaty®/Pfizer-BioNTech COVID-19 Vaccine SPIKEVAX®/Moderna COVID-19 Vaccine
	2vCOV-mRNA	Pfizer-BioNTech COVID-19 Vaccine, Bivalent Moderna COVID-19 Vaccine, Bivalent
	1vCOV-aPS	Novavax COVID-19 Vaccine
Haemophilus influenzae type b vaccine	Hib	ActHIB® Hiberix® PedvaxHIB®
Hepatitis A vaccine	HepA	Havrix® Vaqta®
Hepatitis A and hepatitis B vaccine	HepA-HepB	Twinrix®
Hepatitis B vaccine	HepB	Engerix-B® Heplisav-B® PreHevbrio® Recombivax HB®
Human papillomavirus vaccine	HPV	Gardasil 9®
Influenza vaccine (inactivated)	IIV4	Many brands
Influenza vaccine (live, attenuated)	LAIV4	FluMist® Quadrivalent
Influenza vaccine (recombinant)	RIV4	Flublok® Quadrivalent
Measles, mumps, and rubella vaccine	MMR	M-M-R II® Priorix®
Meningococcal serogroups A, C, W, Y vaccine	MenACWY-D MenACWY-CRM MenACWY-TT	Menactra® Menveo® MenQuadfi®
Meningococcal serogroup B vaccine	MenB-4C MenB-FHbp	Bexsero® Trumenba®
Pneumococcal conjugate vaccine	PCV15 PCV20	Vaxneuvance™ Prevnar 20™
Pneumococcal polysaccharide vaccine	PPSV23	Pneumovax 23®
Poliovirus vaccine	IPV	IPOL®
Tetanus and diphtheria toxoids	Td	Tenivac® Tdvax™
Tetanus and diphtheria toxoids and acellular pertussis vaccine	Tdap	Adacel® Boostrix®
Varicella vaccine	VAR	Varivax®
Zoster vaccine, recombinant	RZV	Shingrix

*Administer recommended vaccines if vaccination history is incomplete or unknown. Do not restart or add doses to vaccine series if there are extended intervals between doses. The use of trade names is for identification purposes only and does not imply endorsement by the ACIP or CDC.

Recommended by the Advisory Committee on Immunization Practices (www.cdc.gov/vaccines/acip) and approved by the Centers for Disease Control and Prevention (www.cdc.gov), American College of Physicians (www.acponline.org), American Academy of Family Physicians (www.aafp.org), American College of Obstetricians and Gynecologists (www.acog.org), American College of Nurse-Midwives (www.midwife.org), American Academy of Physician Associates (www.aapa.org), American Pharmacists Association (www.pharmacist.com), and Society for Healthcare Epidemiology of America (www.shea-online.org).

Report
- Suspected cases of reportable vaccine-preventable diseases or outbreaks to the local or state health department
- Clinically significant postvaccination reactions to the Vaccine Adverse Event Reporting System at www.vaers.hhs.gov or 800-822-7967

Injury claims
All vaccines included in the adult immunization schedule except PPSV23, RZV, and COVID-19 vaccines are covered by the National Vaccine Injury Compensation Program (VICP). COVID-19 vaccines that are authorized or approved by the FDA are covered by the Countermeasures Injury Compensation Program (CICP). For more information, see www.hrsa.gov/vaccinecompensation or www.hrsa.gov/cicp.

Questions or comments
Contact www.cdc.gov/cdc-info or 800-CDC-INFO (800-232-4636), in English or Spanish, 8 a.m.–8 p.m. ET, Monday through Friday, excluding holidays.

Download the CDC Vaccine Schedules app for providers at www.cdc.gov/vaccines/schedules/hcp/schedule-app.html.

Helpful information
- Complete Advisory Committee on Immunization Practices (ACIP) recommendations: www.cdc.gov/vaccines/hcp/acip-recs/index.html
- *General Best Practice Guidelines for Immunization* (including contraindications and precautions): www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html
- Vaccine information statements: www.cdc.gov/vaccines/hcp/vis/index.html
- Manual for the Surveillance of Vaccine-Preventable Diseases (including case identification and outbreak response): www.cdc.gov/vaccines/pubs/surv-manual
- Travel vaccine recommendations: www.cdc.gov/travel
- Recommended Child and Adolescent Immunization Schedule, United States, 2023: www.cdc.gov/vaccines/schedules/hcp/child-adolescent.html
- ACIP Shared Clinical Decision-Making Recommendations: www.cdc.gov/vaccines/acip/acip-scdm-faqs.html

Scan QR code for access to online schedule

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CS310021-C

Table 1 Recommended Adult Immunization Schedule by Age Group, United States, 2023

Vaccine	19–26 years	27–49 years	50–64 years	≥65 years
COVID-19	2- or 3- dose primary series and booster (See Notes)			
Influenza inactivated (IIV4) or **Influenza recombinant** (RIV4)	1 dose annually			
or	or			
Influenza live, attenuated (LAIV4)	1 dose annually			
Tetanus, diphtheria, pertussis (Tdap or Td)	1 dose Tdap each pregnancy; 1 dose Td/Tdap for wound management (see notes)			
	1 dose Tdap, then Td or Tdap booster every 10 years			
Measles, mumps, rubella (MMR)	1 or 2 doses depending on indication (if born in 1957 or later)			For healthcare personnel, see notes
Varicella (VAR)	2 doses (if born in 1980 or later)	2 doses		
Zoster recombinant (RZV)	2 doses for immunocompromising conditions (see notes)		2 doses	
Human papillomavirus (HPV)	2 or 3 doses depending on age at initial vaccination or condition	27 through 45 years		
Pneumococcal (PCV15, PCV20, PPSV23)	1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (see notes)			See Notes
				See Notes
Hepatitis A (HepA)	2, 3, or 4 doses depending on vaccine			
Hepatitis B (HepB)	2, 3, or 4 doses depending on vaccine or condition			
Meningococcal A, C, W, Y (MenACWY)	1 or 2 doses depending on indication, see notes for booster recommendations			
Meningococcal B (MenB)	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations			
	19 through 23 years			
***Haemophilus influenzae* type b** (Hib)	1 or 3 doses depending on indication			

Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection

Recommended vaccination for adults with an additional risk factor or another indication

Recommended vaccination based on shared clinical decision-making

No recommendation/ Not applicable

Table 2 Recommended Adult Immunization Schedule by Medical Condition or Other Indication, United States, 2023

Vaccine	Pregnancy	Immuno-compromised (excluding HIV infection)	HIV infection CD4 percentage and count		Asplenia, complement deficiencies	End-stage renal disease, or on hemodialysis	Heart or lung disease; alcoholism[a]	Chronic liver disease	Diabetes	Health care personnel[b]	Men who have sex with men
			<15% or <200 mm³	≥15% and ≥200 mm³							
COVID-19		See Notes									
IIV4 or RIV4	1 dose annually										
or										or	
LAIV4	Contraindicated					Precaution				1 dose annually	
Tdap or Td	1 dose Tdap each pregnancy	1 dose Tdap, then Td or Tdap booster every 10 years									
MMR	Contraindicated*	Contraindicated		1 or 2 doses depending on indication							
VAR	Contraindicated*	Contraindicated			2 doses						
RZV		2 doses at age ≥19 years			2 doses at age ≥50 years						
HPV	Not Recommended*	3 doses through age 26 years			2 or 3 doses through age 26 years depending on age at initial vaccination or condition						
Pneumococcal (PCV15, PCV20, PPSV23)		1 dose PCV15 followed by PPSV23 OR 1 dose PCV20 (see notes)									
HepA					2, 3, or 4 doses depending on vaccine						
HepB	3 doses (see notes)	2, 3, or 4 doses depending on vaccine or condition									
MenACWY	1 or 2 doses depending on indication, see notes for booster recommendations										
MenB	Precaution	2 or 3 doses depending on vaccine and indication, see notes for booster recommendations									
Hib		3 doses HSCT[c] recipients only			1 dose						

- Recommended vaccination for adults who meet age requirement, lack documentation of vaccination, or lack evidence of past infection
- Recommended vaccination for adults with an additional risk factor or another indication
- Recommended vaccination based on shared clinical decision-making
- Precaution–vaccination might be indicated if benefit of protection outweighs risk of adverse reaction
- Contraindicated or not recommended–vaccine should not be administered.

*Vaccinate after pregnancy.

- No recommendation/ Not applicable

a. Precaution for LAIV4 does not apply to alcoholism. **b.** See notes for influenza; hepatitis B; measles, mumps, and rubella; and varicella vaccinations. **c.** Hematopoietic stem cell transplant.

Notes

Recommended Adult Immunization Schedule for ages 19 years or older, United States, 2023

For vaccine recommendations for persons 18 years of age or younger, see the Recommended Child and Adolescent Immunization Schedule.

COVID-19 vaccination

Routine vaccination

- **Primary series:** 2-dose series at 0, 4-8 weeks (Moderna) or 2-dose series at 0, 3-8 weeks (Novavax, Pfizer-BioNTech)
- **Booster dose:** see www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html

Special situations

Persons who are moderately or severely immunocompromised

- **Primary series**
  - 3-dose series at 0, 4, 8 weeks (Moderna) or 3-dose series at 0, 3, 7 weeks (Pfizer-BioNTech)
  - 2-dose series at 0, 3 weeks (Novavax)
- **Booster dose:** see www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html
- **Pre-exposure prophylaxis (e.g., monoclonal antibodies)** may be considered to complement COVID-19 vaccination. See www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#immunocompromised

For Janssen COVID-19 Vaccine recipients see COVID-19 schedule at www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html.

Note: Current COVID-19 schedule available at www.cdc.gov/vaccines/covid-19/downloads/COVID-19-immunization-schedule-ages-6months-older.pdf. For more information on Emergency Use Authorization (EUA) indications for COVID-19 vaccines, please visit www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines

Haemophilus influenzae type b vaccination

Special situations

- **Anatomical or functional asplenia (including sickle cell disease):** 1 dose if previously did not receive Hib; if elective splenectomy, 1 dose preferably at least 14 days before splenectomy
- **Hematopoietic stem cell transplant (HSCT):** 3-dose series 4 weeks apart starting 6–12 months after successful transplant, regardless of Hib vaccination history

Hepatitis A vaccination

Routine vaccination

- **Not at risk but want protection from hepatitis A** (identification of risk factor not required): 2-dose series HepA (Havrix 6–12 months apart or Vaqta 6–18 months apart [minimum interval: 6 months]) or 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 5 months])

Special situations

- **At risk for hepatitis A virus infection:** 2-dose series HepA or 3-dose series HepA-HepB as above
  - **Chronic liver disease** (e.g., persons with hepatitis B, hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice the upper limit of normal)
  - **HIV infection**
  - **Men who have sex with men**
  - **Injection or noninjection drug use**
  - **Persons experiencing homelessness**
  - **Work with hepatitis A virus** in research laboratory or with nonhuman primates with hepatitis A virus infection
  - **Travel in countries with high or intermediate endemic hepatitis A** (HepA-HepB [Twinrix] may be administered on an accelerated schedule of 3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months)
  - **Close, personal contact with international adoptee** (e.g., household or regular babysitting) in first 60 days after arrival from country with high or intermediate endemic hepatitis A (administer dose 1 as soon as adoption is planned, at least 2 weeks before adoptee's arrival)
  - **Pregnancy** if at risk for infection or severe outcome from infection during pregnancy
  - **Settings for exposure,** including health care settings targeting services to injection or noninjection drug users or group homes and nonresidential day care facilities for developmentally disabled persons (individual risk factor screening not required)

Hepatitis B vaccination

Routine vaccination

- **Age 19 through 59 years: complete a 2- or 3- or 4-dose series**
  - 2-dose series only applies when 2 doses of Heplisav-B* are used at least 4 weeks apart
  - 3-dose series Engerix-B, PreHevbrio*, or Recombivax HB at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 8 weeks / dose 1 to dose 3: 16 weeks])
  - 3-dose series HepA-HepB (Twinrix at 0, 1, 6 months [minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 5 months])
  - 4-dose series HepA-HepB (Twinrix) accelerated schedule of 3 doses at 0, 7, and 21–30 days, followed by a booster dose at 12 months

*__Note:__ Heplisav-B and PreHevbrio are not recommended in pregnancy due to lack of safety data in pregnant persons.

Notes

- **Age 60 years or older with** known risk factors for hepatitis B virus infection **should** complete a HepB vaccine series.
- **Age 60 years or older without** known risk factors for hepatitis B virus infection **may** complete a HepB vaccine series.
  - **Risk factors for hepatitis B virus infection include:**
    - **Chronic liver disease** (e.g., persons with hepatitis C, cirrhosis, fatty liver disease, alcoholic liver disease, autoimmune hepatitis, alanine aminotransferase [ALT] or aspartate aminotransferase [AST] level greater than twice upper limit of normal)
    - **HIV infection**
    - **Sexual exposure risk** (e.g., sex partners of hepatitis B surface antigen [HBsAg]-positive persons; sexually active persons not in mutually monogamous relationships; persons seeking evaluation or treatment for a sexually transmitted infection; men who have sex with men)
    - **Current or recent injection drug use**
    - **Percutaneous or mucosal risk for exposure to blood** (e.g., household contacts of HBsAg-positive persons; residents and staff of facilities for developmentally disabled persons; health care and public safety personnel with reasonably anticipated risk for exposure to blood or blood-contaminated body fluids; persons on maintenance dialysis, including in-center or home hemodialysis and peritoneal dialysis, and persons who are predialysis; patients with diabetes)
    - **Incarceration**
    - **Travel in countries with high or intermediate endemic hepatitis B**

Special situations

- **Patients on dialysis:** complete a 3- or 4-dose series
  - 3-dose series Recombivax HB at 0, 1, 6 months (note: use Dialysis Formulation 1 mL = 40 mcg)
  - 4-dose series Engerix-B at 0, 1, 2, and 6 months (note: use 2 mL dose instead of the normal adult dose of 1 mL)

Human papillomavirus vaccination

Routine vaccination

- **HPV vaccination recommended for all persons through age 26 years:** 2- or 3-dose series depending on age at initial vaccination or condition:
  - **Age 15 years or older at initial vaccination:** 3-dose series at 0, 1–2 months, 6 months (minimum intervals: dose 1 to dose 2: 4 weeks / dose 2 to dose 3: 12 weeks / dose 1 to dose 3: 5 months; repeat dose if administered too soon)
  - **Age 9–14 years at initial vaccination and received 1 dose or 2 doses less than 5 months apart:** 1 additional dose
  - **Age 9–14 years at initial vaccination and received 2 doses at least 5 months apart:** HPV vaccination series complete, no additional dose needed
- **Interrupted schedules:** If vaccination schedule is interrupted, the series does not need to be restarted
- **No additional dose recommended when any HPV vaccine series has been completed using the recommended dosing intervals.**

Shared clinical decision-making

- **Some adults age 27–45 years:** Based on shared clinical decision-making, 2- or 3-dose series as above

Special situations

- **Age ranges recommended above for routine and catch-up vaccination or shared clinical decision-making also apply in special situations**
  - **Immunocompromising conditions, including HIV infection**: 3-dose series, even for those who initiate vaccination at age 9 through 14 years.
  - **Pregnancy**: Pregnancy testing is not needed before vaccination; HPV vaccination is not recommended until after pregnancy; no intervention needed if inadvertently vaccinated while pregnant

Influenza vaccination

Routine vaccination

- **Age 19 years or older:** 1 dose any influenza vaccine appropriate for age and health status annually.
  - **Age 65 years or older:** Any one of quadrivalent high-dose inactivated influenza vaccine (HD-IIV4), quadrivalent recombinant influenza vaccine (RIV4), or quadrivalent adjuvanted inactivated influenza vaccine (aIIV4) is preferred. If none of these three vaccines is available, then any other age-appropriate influenza vaccine should be used.
- For the 2022–2023 season, see www.cdc.gov/mmwr/volumes/71/rr/rr7101a1.htm
- For the 2023–2024 season, see the 2023–2024 ACIP influenza vaccine recommendations.

Special situations

- **Egg allergy, hives only:** any influenza vaccine appropriate for age and health status annually
- **Egg allergy–any symptom other than hives** (e.g., angioedema, respiratory distress or required epinephrine or another emergency medical intervention): Any influenza vaccine appropriate for age and health status may be administered. If using egg-based IIV4 or LAIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions.
- **Close contacts (e.g., caregivers, healthcare workers) of severely immunosuppressed persons who require a protected environment:** these persons should not receive LAIV4. If LAIV4 is given, they should avoid contact with/caring for such immunosuppressed persons for 7 days after vaccination.
- **Severe allergic reaction (e.g., anaphylaxis) to a vaccine component or a previous dose of any influenza vaccine:** see Appendix listing contraindications and precautions

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- **History of Guillain-Barré syndrome within 6 weeks after previous dose of influenza vaccine:** Generally, should not be vaccinated unless vaccination benefits outweigh risks for those at higher risk for severe complications from influenza

Measles, mumps, and rubella vaccination

Routine vaccination

- **No evidence of immunity to measles, mumps, or rubella:** 1 dose
  - **Evidence of immunity:** Born before 1957 (health care personnel, see below), documentation of receipt of MMR vaccine, laboratory evidence of immunity or disease (diagnosis of disease without laboratory confirmation is not evidence of immunity)

Special situations

- **Pregnancy with no evidence of immunity to rubella:** MMR contraindicated during pregnancy; after pregnancy (before discharge from health care facility), 1 dose
- **Nonpregnant persons of childbearing age with no evidence of immunity to rubella:** 1 dose
- **HIV infection with CD4 percentages ≥15% and CD4 count ≥200 cells/mm³ for at least 6 months and no evidence of immunity to measles, mumps, or rubella:** 2-dose series at least 4 weeks apart; MMR contraindicated for HIV infection with CD4 percentage <15% or CD4 count <200 cells/mm³
- **Severe immunocompromising conditions:** MMR contraindicated
- **Students in postsecondary educational institutions, international travelers, and household or close, personal contacts of immunocompromised persons with no evidence of immunity to measles, mumps, or rubella:** 2-dose series at least 4 weeks apart if previously did not receive any doses of MMR or 1 dose if previously received 1 dose MMR
- **In mumps outbreak settings,** for information about additional doses of MMR (including 3rd dose of MMR), see www.cdc.gov/mmwr/volumes/67/wr/mm6701a7.htm
- **Health care personnel:**
  - **Born before 1957 with no evidence of immunity to measles, mumps, or rubella:** Consider 2-dose series at least 4 weeks apart for protection against measles or mumps or 1 dose for protection against rubella
  - **Born in 1957 or later with no evidence of immunity to measles, mumps, or rubella:** 2-dose series at least 4 weeks apart for protection against measles or mumps or at least 1 dose for protection against rubella

Meningococcal vaccination

Special situations for MenACWY

- **Anatomical or functional asplenia (including sickle cell disease), HIV infection, persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use:** 2-dose series MenACWY-D (Menactra, Menveo, or MenQuadfi) at least 8 weeks apart and revaccinate every 5 years if risk remains
- **Travel in countries with hyperendemic or epidemic meningococcal disease, or microbiologists routinely exposed to *Neisseria meningitidis*:** 1 dose MenACWY (Menactra, Menveo, or MenQuadfi) and revaccinate every 5 years if risk remains
- **First-year college students who live in residential housing (if not previously vaccinated at age 16 years or older) or military recruits:** 1 dose MenACWY (Menactra, Menveo, or MenQuadfi)
- For MenACWY **booster dose recommendations** for groups listed under "Special situations" and in an outbreak setting (e.g., in community or organizational settings and among men who have sex with men) and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm

Shared clinical decision-making for MenB

- **Adolescents and young adults age 16–23 years (age 16–18 years preferred) not at increased risk for meningococcal disease:** Based on shared clinical decision-making, 2-dose series MenB-4C (Bexsero) at least 1 month apart or 2-dose series MenB-FHbp (Trumenba) at 0, 6 months (if dose 2 was administered less than 6 months after dose 1, administer dose 3 at least 4 months after dose 2); MenB-4C and MenB-FHbp are not interchangeable (use same product for all doses in series)

Special situations for MenB

- **Anatomical or functional asplenia (including sickle cell disease), persistent complement component deficiency, complement inhibitor (e.g., eculizumab, ravulizumab) use, or microbiologists routinely exposed to *Neisseria meningitidis*:** 2-dose primary series MenB-4C (Bexsero) at least 1 month apart or 3-dose primary series MenB-FHbp (Trumenba) at 0, 1–2, 6 months (if dose 2 was administered at least 6 months after dose 1, dose 3 not needed; if dose 3 is administered earlier than 4 months after dose 2, a fourth dose should be administered at least 4 months after dose 3); MenB-4C and MenB-FHbp are not interchangeable (use same product for all doses in series); 1 dose MenB booster 1 year after primary series and revaccinate every 2–3 years if risk remains
- **Pregnancy:** Delay MenB until after pregnancy unless at increased risk and vaccination benefits outweigh potential risks
- For MenB **booster dose recommendations** for groups listed under "Special situations" and in an outbreak setting (e.g., in community or organizational settings and among men who have sex with men) and additional meningococcal vaccination information, see www.cdc.gov/mmwr/volumes/69/rr/rr6909a1.htm

Note: MenB vaccines may be administered simultaneously with MenACWY vaccines if indicated, but at a different anatomic site, if feasible.

Notes

Pneumococcal vaccination

Routine vaccination

- **Age 65 years or older who have:**
  - **Not previously received a dose of PCV13, PCV15, or PCV20 or whose previous vaccination history is unknown:** 1 dose PCV15 OR 1 dose PCV20. If PCV15 is used, this should be followed by a dose of PPSV23 given at least 1 year after the PCV15 dose. A minimum interval of 8 weeks between PCV15 and PPSV23 can be considered for adults with an immunocompromising condition,* cochlear implant, or cerebrospinal fluid leak to minimize the risk of invasive pneumococcal disease caused by serotypes unique to PPSV23 in these vulnerable groups.
  - **Previously received only PCV7:** follow the recommendation above.
  - **Previously received only PCV13:** 1 dose PCV20 at least 1 year after the PCV13 dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.
  - **Previously received only PPSV23:** 1 dose PCV15 OR 1 dose PCV20 at least 1 year after the PPSV23 dose. If PCV15 is used, it need not be followed by another dose of PPSV23.
  - **Previously received both PCV13 and PPSV23 but NO PPSV23 was received at age 65 years or older:** 1 dose PCV20 at least 5 years after their last pneumococcal vaccine dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.
  - **Previously received both PCV13 and PPSV23, AND PPSV23 was received at age 65 years or older:** Based on shared clinical decision-making, 1 dose of PCV20 at least 5 years after the last pneumococcal vaccine dose.
- For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app which can be downloaded here: www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html

Special situations

- **Age 19–64 years with certain underlying medical conditions or other risk factors** who have**
  - **Not previously received a PCV13, PCV15, or PCV20 or whose previous vaccination history is unknown:** 1 dose PCV15 OR 1 dose PCV20. If PCV15 is used, this should be followed by a dose of PPSV23 given at least 1 year after the PCV15 dose. A minimum interval of 8 weeks between PCV15 and PPSV23 can be considered for adults with an immunocompromising condition,* cochlear implant, or cerebrospinal fluid leak
  - **Previously received only PCV7:** follow the recommendation above.
  - **Previously received only PCV13:** 1 dose PCV20 at least 1 year after the PCV13 dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.
  - **Previously received only PPSV23:** 1 dose PCV15 OR 1 dose PCV20 at least 1 year after the PPSV23 dose. If PCV15 is used, it need not be followed by another dose of PPSV23.
  - **Previously received both PCV13 and PPSV23 but have not completed the recommended series:** 1 dose PCV20 at least 5 years after their last pneumococcal vaccine dose OR complete the recommended PPSV23 series as described here www.cdc.gov/vaccines/vpd/pneumo/downloads/pneumo-vaccine-timing.pdf.
- For guidance on determining which pneumococcal vaccines a patient needs and when, please refer to the mobile app which can be downloaded here: www.cdc.gov/vaccines/vpd/pneumo/hcp/pneumoapp.html

*__Note:__ Immunocompromising conditions include chronic renal failure, nephrotic syndrome, immunodeficiency, iatrogenic immunosuppression, generalized malignancy, human immunodeficiency virus, Hodgkin disease, leukemia, lymphoma, multiple myeloma, solid organ transplants, congenital or acquired asplenia, sickle cell disease, or other hemoglobinopathies.

**__Note:__ Underlying medical conditions or other risk factors include alcoholism, chronic heart/liver/lung disease, chronic renal failure, cigarette smoking, cochlear implant, congenital or acquired asplenia, CSF leak, diabetes mellitus, generalized malignancy, HIV, Hodgkin disease, immunodeficiency, iatrogenic immunosuppression, leukemia, lymphoma, multiple myeloma, nephrotic syndrome, solid organ transplants, or sickle cell disease or other hemoglobinopathies.

Polio vaccination

Routine vaccination

Routine poliovirus vaccination of adults residing in the United States is not necessary.

Special situations

- **Adults at increased risk of exposure to poliovirus with:**
  - No evidence of a complete polio vaccination series (i.e., at least 3 doses): administer remaining doses (1, 2, or 3 doses) to complete a 3-dose series
  - Evidence of completed polio vaccination series (i.e., at least 3 doses): may administer one lifetime IPV booster

For detailed information, see: www.cdc.gov/vaccines/vpd/polio/hcp/recommendations.html

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Tetanus, diphtheria, and pertussis vaccination

Routine vaccination

- **Previously did not receive Tdap at or after age 11 years:** 1 dose Tdap, then Td or Tdap every 10 years

Special situations

- **Previously did not receive primary vaccination series for tetanus, diphtheria, or pertussis:** 1 dose Tdap followed by 1 dose Td or Tdap at least 4 weeks later, and a third dose of Td or Tdap 6–12 months later (Tdap can be substituted for any Td dose, but preferred as first dose), Td or Tdap every 10 years thereafter
- **Pregnancy:** 1 dose Tdap during each pregnancy, preferably in early part of gestational weeks 27–36
- **Wound management:** Persons with 3 or more doses of tetanus-toxoid-containing vaccine: For clean and minor wounds, administer Tdap or Td if more than 10 years since last dose of tetanus-toxoid-containing vaccine; for all other wounds, administer Tdap or Td if more than 5 years since last dose of tetanus-toxoid-containing vaccine. Tdap is preferred for persons who have not previously received Tdap or whose Tdap history is unknown. If a tetanus-toxoid-containing vaccine is indicated for a pregnant woman, use Tdap. For detailed information, see www.cdc.gov/mmwr/volumes/69/wr/mm6903a5.htm

Varicella vaccination

Routine vaccination

- **No evidence of immunity to varicella:** 2-dose series 4–8 weeks apart if previously did not receive varicella-containing vaccine (VAR or MMRV [measles-mumps-rubella-varicella vaccine] for children); if previously received 1 dose varicella-containing vaccine, 1 dose at least 4 weeks after first dose
  - **Evidence of immunity:** U.S.-born before 1980 (except for pregnant persons and health care personnel [see below]), documentation of 2 doses varicella-containing vaccine at least 4 weeks apart, diagnosis or verification of history of varicella or herpes zoster by a health care provider, laboratory evidence of immunity or disease

Special situations

- **Pregnancy with no evidence of immunity to varicella:** VAR contraindicated during pregnancy; after pregnancy (before discharge from health care facility), 1 dose if previously received 1 dose varicella-containing vaccine or dose 1 of 2-dose series (dose 2: 4–8 weeks later) if previously did not receive any varicella-containing vaccine, regardless of whether U.S.-born before 1980
- **Health care personnel with no evidence of immunity to varicella:** 1 dose if previously received 1 dose varicella-containing vaccine; 2-dose series 4–8 weeks apart if previously did not receive any varicella-containing vaccine, regardless of whether U.S.-born before 1980
- **HIV infection with CD4 percentages ≥15% and CD4 count ≥200 cells/mm^3 with no evidence of immunity:** Vaccination may be considered (2 doses 3 months apart); VAR contraindicated for HIV infection with CD4 percentage <15% or CD4 count <200 cells/mm^3
- **Severe immunocompromising conditions:** VAR contraindicated

Zoster vaccination

Routine vaccination

- **Age 50 years or older*:** 2-dose series recombinant zoster vaccine (RZV, Shingrix) 2–6 months apart (minimum interval: 4 weeks; repeat dose if administered too soon), regardless of previous herpes zoster or history of zoster vaccine live (ZVL, Zostavax) vaccination.

***Note:** Serologic evidence of prior varicella is not necessary for zoster vaccination. However, if serologic evidence of varicella susceptibility becomes available, providers should follow ACIP guidelines for varicella vaccination first. RZV is not indicated for the prevention of varicella, and there are limited data on the use of RZV in persons without a history of varicella or varicella vaccination.

Special situations

- **Pregnancy:** There is currently no ACIP recommendation for RZV use in pregnancy. Consider delaying RZV until after pregnancy.
- **Immunocompromising conditions (including persons with HIV regardless of CD4 count)**:** 2-dose series recombinant zoster vaccine (RZV, Shingrix) 2–6 months apart (minimum interval: 4 weeks; repeat dose if administered too soon). For detailed information, see www.cdc.gov/shingles/vaccination/immunocompromised-adults.html

****Note:** If there is no documented history of varicella, varicella vaccination, or herpes zoster, providers should refer to the clinical considerations for use of RZV in immunocompromised adults aged ≥19 years and the ACIP varicella vaccine recommendations for further guidance: www.cdc.gov/mmwr/volumes/71/wr/mm7103a2.htm

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Guide to Contraindications and Precautions to Commonly Used Vaccines

Adapted from Table 4-1 in Advisory Committee on Immunization Practices (ACIP) General Best Practice Guidelines for Immunization: Contraindication and Precautions available at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html *and ACIP's Recommendations for the Prevention and Control of 2022-23 Seasonal Influenza with Vaccines available at www.cdc.gov/mmwr/volumes/71/rr/rr7101a1.htm*

For COVID-19 vaccine contraindications and precautions see
www.cdc.gov/vaccines/covid-19/clinical-considerations/interim-considerations-us.html#contraindications

Vaccine	Contraindicated or Not Recommended[1]	Precautions[2]
Influenza, egg-based, inactivated injectable (IIV4)	• Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV of any valency) • Severe allergic reaction (e.g., anaphylaxis) to any vaccine component[3] (excluding egg)	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Moderate or severe acute illness with or without fever
Influenza, cell culture-based inactivated injectable [(ccIIV4), Flucelvax® Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) to any ccIIV of any valency, or to any component[3] of ccIIV4	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, RIV, or LAIV of any valency. If using ccIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. • Moderate or severe acute illness with or without fever
Influenza, recombinant injectable [(RIV4), Flublok® Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) to any RIV of any valency, or to any component[3] of RIV4	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Persons with a history of severe allergic reaction (e.g., anaphylaxis) after a previous dose of any egg-based IIV, ccIIV, or LAIV of any valency. If using RIV4, administer in medical setting under supervision of health care provider who can recognize and manage severe allergic reactions. May consult an allergist. • Moderate or severe acute illness with or without fever
Influenza, live attenuated [LAIV4, Flumist® Quadrivalent]	• Severe allergic reaction (e.g., anaphylaxis) after previous dose of any influenza vaccine (i.e., any egg-based IIV, ccIIV, RIV, or LAIV of any valency) • Severe allergic reaction (e.g., anaphylaxis) to any vaccine component[3] (excluding egg) • Anatomic or functional asplenia • Immunocompromised due to any cause including, but not limited to, medications and HIV infection • Close contacts or caregivers of severely immunosuppressed persons who require a protected environment • Pregnancy • Cochlear implant • Active communication between the cerebrospinal fluid (CSF) and the oropharynx, nasopharynx, nose, ear, or any other cranial CSF leak • Received influenza antiviral medications oseltamivir or zanamivir within the previous 48 hours, peramivir within the previous 5 days, or baloxavir within the previous 17 days.	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of any type of influenza vaccine • Asthma in persons aged 5 years old or older • Persons with underlying medical conditions (other than those listed under contraindications) that might predispose to complications after wild-type influenza virus infection [e.g., chronic pulmonary, cardiovascular (except isolated hypertension), renal, hepatic, neurologic, hematologic, or metabolic disorders (including diabetes mellitus)] • Moderate or severe acute illness with or without fever

1. When a contraindication is present, a vaccine should NOT be administered. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. Package inserts for U.S.-licensed vaccines are available at www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states.

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Vaccine	Contraindicated or Not Recommended[1]	Precautions[2]
Haemophilus influenzae type b (Hib)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For Hiberix, ActHib, and PedvaxHIB only: History of severe allergic reaction to dry natural latex	• Moderate or severe acute illness with or without fever
Hepatitis A (HepA)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including neomycin	• Moderate or severe acute illness with or without fever
Hepatitis B (HepB)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including yeast • *Pregnancy: Heplisav-B and PreHevbrio are not recommended due to lack of safety data in pregnant persons. Use other hepatitis B vaccines if HepB is indicated*[4]	• Moderate or severe acute illness with or without fever
Hepatitis A- Hepatitis B vaccine [HepA-HepB, (Twinrix®)]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] including neomycin and yeast	• Moderate or severe acute illness with or without fever
Human papillomavirus (HPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • *Pregnancy: HPV vaccination not recommended*	• Moderate or severe acute illness with or without fever
Measles, mumps, rubella (MMR)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) • Pregnancy • Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent	• Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) • History of thrombocytopenia or thrombocytopenic purpura • Need for tuberculin skin testing or interferon-gamma release assay (IGRA) testing • Moderate or severe acute illness with or without fever
Meningococcal ACWY (MenACWY) [MenACWY-CRM (Menveo®); MenACWY-D (Menactra®); MenACWY-TT (MenQuadfi®)]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For MenACWY-D and MenACWY-CRM only: severe allergic reaction to any diphtheria toxoid–or CRM197–containing vaccine • For MenACWY-TT only: severe allergic reaction to a tetanus toxoid-containing vaccine	• Moderate or severe acute illness with or without fever
Meningococcal B (MenB) [MenB-4C (Bexsero); MenB-FHbp (Trumenba)]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Pregnancy • For MenB-4C only: Latex sensitivity • Moderate or severe acute illness with or without fever
Pneumococcal conjugate (PCV15, PCV20)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe allergic reaction (e.g., anaphylaxis) to any diphtheria-toxoid–containing vaccine or to its vaccine component[3]	• Moderate or severe acute illness with or without fever
Pneumococcal polysaccharide (PPSV23)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Moderate or severe acute illness with or without fever
Tetanus, diphtheria, and acellular pertussis (Tdap) Tetanus, diphtheria (Td)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • For Tdap only: Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures), not attributable to another identifiable cause, within 7 days of administration of previous dose of DTP, DTaP, or Tdap	• Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of tetanus-toxoid–containing vaccine • History of Arthus-type hypersensitivity reactions after a previous dose of diphtheria-toxoid–containing or tetanus-toxoid–containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid–containing vaccine • Moderate or severe acute illness with or without fever • For Tdap only: Progressive or unstable neurological disorder, uncontrolled seizures, or progressive encephalopathy until a treatment regimen has been established and the condition has stabilized
Varicella (VAR)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3] • Severe immunodeficiency (e.g., hematologic and solid tumors, receipt of chemotherapy, congenital immunodeficiency, long-term immunosuppressive therapy or patients with HIV infection who are severely immunocompromised) • Pregnancy • Family history of altered immunocompetence, unless verified clinically or by laboratory testing as immunocompetent	• Recent (≤11 months) receipt of antibody-containing blood product (specific interval depends on product) • Receipt of specific antiviral drugs (acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination (avoid use of these antiviral drugs for 14 days after vaccination) • Use of aspirin or aspirin-containing products • Moderate or severe acute illness with or without fever
Zoster recombinant vaccine (RZV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component[3]	• Moderate or severe acute illness with or without fever • Current herpes zoster infection

1. When a contraindication is present, a vaccine should NOT be administered. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
2. When a precaution is present, vaccination should generally be deferred but might be indicated if the benefit of protection from the vaccine outweighs the risk for an adverse reaction. Kroger A, Bahta L, Hunter P. ACIP General Best Practice Guidelines for Immunization. www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html
3. Vaccination providers should check FDA-approved prescribing information for the most complete and updated information, including contraindications, warnings, and precautions. Package inserts for U.S.-licensed vaccines are available at www.fda.gov/vaccines-blood-biologics/approved-products/vaccines-licensed-use-united-states.
4. For information on the pregnancy exposure registries for persons who were inadvertently vaccinated with Heplisav-B or PreHevbrio while pregnant, please visit heplisavbpregnancyregistry.com/ or www.prehevbrio.com/#safety.

San Diego County Immunization Initiative

Binational Immunization Guide: Interpreting Immunization Schedules

Mexico → California

This Guide provides information on Mexico's Immunization Schedule, including number of doses and recommended ages. Mexico's schedule is compared side-by-side to the "Recommended Childhood and Adolescent Immunization Schedule" followed by healthcare providers in CA. The Guide also includes information on vaccines available in Mexico in the public sector (this side) and private sector (back).

The Guide facilitates the interpretation of Mexico's Immunization Record and assists healthcare providers, school staff, and childcare providers in assessing immunization records of binational children.

This document follows the format of the "Cartilla Nacional de Vacunación" or National Immunization Record, one of four National Health Records (see below) used throughout Mexico.

Children & Adolescents

Women 20-59 Yrs

Men

Seniors

MEXICO					CALIFORNIA		
ESQUEMA BÁSICO DE VACUNACIÓN (Primary Immunization Series Administered by 1 yr)					**BASIC IMMUNIZATION SCHEDULE**		
VACUNA *(Vaccine)*	ENFERMEDAD *(Disease)*	DOSIS *(Dose)*	EDAD *(age)*	Equivalency	PREVENTABLE DISEASE	VACCINE USED IN CA	SCHEDULE
BCG	**Tuberculosis**	Única (only one)	Birth	≠	Tuberculosis	Not Used in California	
Sabin *(OPV)*	**Poliomielitis**	Primera (1)	2 m	≡	Polio	IPV *or*	2 m, 4 m, 6-18 m
		Segunda (2)	4 m			Pediarix DTaP + **IPV** + Hep B	2 m, 4 m, 6 m
		Tercera (3)	6 m				
Pentavalente DPT + HB + Hib *(DTP-Hep B-Hib)*	**Difteria Tos Ferina Tétanos Hepatitis B Infecciones por *H influenzae b***	Primera (1)	2 m	≡	Diphtheria Pertussis Tetanus Hepatitis B Hib	DTaP	2 m, 4 m, 6 m
						Hep B	2 m, 4 m, 6 m
		Segunda (2)	4 m			Hib	2 m, 4 m, 6 m^
						Pediarix DTaP + IPV + Hep B	2 m, 4 m, 6 m
		Tercera (3)	6 m			Comvax Hep B + Hib	2 m, 4 m
Triple Viral SRP *(MMR)*	**Sarampión Rubéola Parotiditis**	Primera (1)	1 yr	≡	Measles Rubella Mumps	MMR	12-15 m
ESQUEMA COMPLEMENTARIO DE VACUNACIÓN (Booster Doses and Catch-up Schedule for Children > 1yr)					**COMPLEMENTARY IMMUNIZATION SCHEDULE (Boosters and Catch-up Schedule)**		
Sabin *(OPV)*	**Poliomielitis**	Additional (Additional)	Twice a year (up to 5th yr)	≈	Polio	IPV	4-6 yrs
DPT *(DTP)*	Difteria Tos Ferina Tétanos	Refuerzo 1 (Booster)	2 yr	≡	Diphtheria Pertussis Tetanus	DTaP (Acellular Pertussis)	12-18 m
		Refuerzo 2	4 yr	+			4-6 yr
Triple Viral SRP *(MMR)*	**Sarampión Rubéola Parotiditis**	Segunda (2)	6 yr	≡	Measles Rubella Mumps	MMR	4-6 yr
Td	**Tétanos Difteria**	Refuerzo (Booster)	Booster after 12 yrs	≡	Tetanus Diphtheria	Td or Tdap	11-12 yr
ANTIHEPATITIS B* *(Hep B)*	**Hepatitis B (HB)**	Primera (1)	12th b-day	+	Hepatitis B	Hep B*	11-12 yr (2 or 3 doses◉)
		Segunda (2)	1 mo. after 1st				
SR* *(MR)*	**Sarampión Rubéola**	Adicionales (Additional)	Booster	≠	Measles Rubella	Not Used in California	
No booster doses administered for Hib vaccine. An additional dose needed for children > 1 year of age.				+	H. Influenzae type B	Hib *or*	12-15 m
						Comvax Hep B + Hib	12-15 m

≠Not Used in US ≡Equivalent Schedule + Additional Doses Needed ≈Different Schedule, but Valid Doses

* These vaccines are part of a catch-up schedule for older children and adolescents.

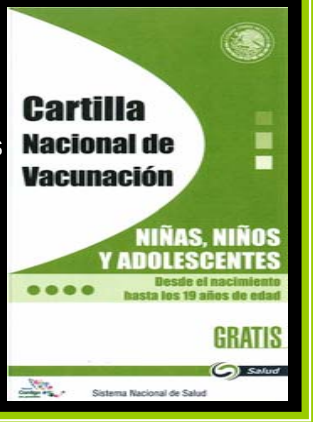
^ Dose may be skipped if Pedvax HIB is exclusively used

◉Number of doses depend on brand of vaccine used and age of patient. Adolescents between the ages of 11-15 years may receive only two doses.

Tips on Interpreting Mexico's National Immunization Record (Cartilla Nacional de Vacunación)

The Mexican Immunization Record is the official document used nationally to record immunizations provided to children and adolescents in Mexico (birth to 19 years of age) in the public and private sector.

This document also helps parents and family members to know their children's basic immunizations and the recommended ages for each vaccine.



Demographic Information

The first section on the inside of this document contains demographic information.

- Name Section Includes "primer y segundo apellido (first and second last name)" or paternal and maternal last names, respectively.
- Dates in Mexico are written Day/ Month/ Year. For instance 20/ 1 /2003 = Jan 20, 2003

Basic Immunization Schedule

The second part of the document contains information on the basic childhood immunization schedule, outlined in 5 columns:

1-VACUNA (Vaccine)
2- ENFERMEDAD QUE PREVIENE (Preventable Disease)
3- DOSIS (Dose)
4-EDAD (Age)
5-FECHA DE VACUNACIÓN (Date of Vaccine Administration).

- Dates of vaccine administration are recorded in pen.
- Next due date is always recorded in pencil.
- Clinic stamp or signature of person administering vaccine & title, are recorded next to the date of vaccination.

Private Sector Vaccines

Vaccines administered in the private sector are recorded in the gray section: OTRAS (other)

MEXICO (Private Sector)			CALIFORNIA		
Recommended Schedule	**Vaccine**	**Preventable Disease**		**Vaccine**	**Recommended Schedule**
2m, 4m, 6m	Pentavalente DPT + HB+ **Hib** Pediarix is not available in Mexico	Diphtheria Pertussis Tetanus Hepatitis B **Hib**	Diphtheria Pertussis Tetanus Hepatitis B **IPV**	Pediarix DTaP + **IPV** + Hep B	2m, 4m, 6m
Hep B + Hib Vaccine Not used in Mexico			Hepatitis B H influenzae b	Comvax Hep B + Hib	2m, 4m, 12-15m
12-18 months	Varicela	Varicella		Varicella	12-18 months
2m, 4m, 6m, and 12-15m	Antineumocócica Conjugada (7 serotipos)	Pneumococcal Disease		Pneumoccocal Conjugate Vaccine (7-valent)	2m, 4m, 6m, and 12-15m
2 yrs, and 6m after dose #1	Hepatitis A*	Hepatitis A		Hepatitis A	2 yrs, and 6m after dose #1
Single antigen not used. Only available as part of "Pentavalente" given at 2, 4, and 6 months of age.		H influenzae b		Hib	2m, 4m, 6m, and 12-15m
Yearly, after 6 months of age	Influenza	Influenza		Influenza	Annual for children 6-23 month of age.

About Vaccines Available in Mexico in Private Practice

Although the majority of vaccines included the Mexican Immunization Record are administered in the public sector, some patients may opt to receive additional shots recommended by their pediatricians (private sector). These Vaccines are also recorded in the National Immunization Record in the gray section named "OTRAS" (other vaccines) of the Vaccine column.

Listed in the table to the left are some of the vaccines available in private practice. Combination vaccines available in CA and Mexico are also included in the table (different vaccine components in Pentavalente and Pediarix vaccines are highlighted in color).

*Twinrix (Hep A/B) schedule is 3 doses after 1 year of age. Other products may be administered as early as one year of age, although some providers may administer this vaccine at 2 yrs of age, following the US Recommended Schedule.

Produced by the San Diego Immunization Branch in collaboration with the San Diego Tijuana Binational Immunization Initiative. To download this Guide visit:
www.immunization-sd.org./school/eng/materials.html
Rev.12/05

Immunization Schedule with Combination Vaccines

EVERY FALL: FLU VACCINE[4] for anyone 6 months and older

	2 MONTHS	4 MONTHS	6 MONTHS	12 MONTHS	15 MONTHS	18 MONTHS	4-6 YEARS
PEDIARIX® PROQUAD® QUADRACEL™ or KINRIX®	**PEDIARIX®** DTaP, IPV, HepB + PCV, Rotavirus, Hib	**PEDIARIX®** DTaP, IPV, HepB[1] + PCV, Rotavirus, Hib	**PEDIARIX®** DTaP, IPV, HepB + PCV, Rotavirus[2], Hib[3]	PCV, Hib, HepA, MMR[6], Varicella[6]	DTaP	HepA	**QUADRACEL™ or KINRIX®[5]** DTaP, IPV + **PROQUAD®** MMRV
PENTACEL®[5] PROQUAD® QUADRACEL™ or KINRIX®	**PENTACEL®** DTaP, IPV, Hib + PCV, Rotavirus, HepB	**PENTACEL®** DTaP, IPV, Hib + PCV, Rotavirus, HepB[1]	**PENTACEL®** DTaP, IPV, Hib + PCV, Rotavirus[2], HepB	PCV, HepA, MMR[6], Varicella[6]	**PENTACEL®** DTaP, IPV, Hib	HepA	**QUADRACEL™ or KINRIX®[5]** DTaP, IPV + **PROQUAD®** MMRV
PROQUAD® QUADRACEL™ or KINRIX®	DTaP, IPV, HepB, Hib, PCV, Rotavirus	DTaP, IPV, HepB[1], Hib, PCV, Rotavirus	DTaP, IPV, HepB, Hib[3], PCV, Rotavirus[2]	Hib, PCV, HepA, MMR[6], Varicella[6]	DTaP	HepA	**QUADRACEL™ or KINRIX®[5]** DTaP, IPV + **PROQUAD®** MMRV

Make sure the vaccine you administer contains the antigens on the doctor's order. Keep it simple. Stick with the same product.

This is a suggested schedule for VFC providers ordering combination vaccines. For alternatives and details, consult the latest "Recommended Immunization Schedules for persons aged 0-18 years, United States." For more info, visit EZIZ.org

1 A dose of Hepatitis B vaccine is not necessary at 4 months if doses are given at birth and 2 months but may be included as part of a combination vaccine.

2 The six month dose is not needed if Rotarix® was used exclusively for both dose 1 and 2 of the rotavirus vaccine series. .

3 This six month Hib dose is not indicated if PedvaxHIB® is used exclusively for the 2 and 4 month infant doses.

4 Influenza vaccine is available in thimerosal-free options. See California Health and Safety Code § 124172.

5 Licensed by FDA for children 4 through 6 years with previous doses of INFANRIX™ or PEDIARIX™. ACIP recommends that, whenever feasible, the same manufacturer's DTaP vaccines be used for each dose in the series; however, vaccination should not be deferred because the type of DTaP previously administered is unavailable or unknown. See www.cdc.gov/mmwr/preview/mmwrhtml/mm5739a4.htm

6 CDC recommends MMR + Varicella at 12-15 months. Providers can use their discretion whether to use MMRV, however.

California Department of Public Health, Immunization Branch IMM-922 (4/17)

VACCINES for CHILDREN CALIFORNIA VFC

COVID-19 Vaccine

Interim COVID-19 Immunization Schedule for Persons 6 Months of Age and Older

The following tables provide guidance for COVID-19 vaccination schedules based on age and medical condition and vaccine composition.

Table 1a. **Moderna: Immunization Schedule for Children 6 Months through 17 Years of Age**

Age*	For Most People		Those Who **ARE** Moderately or Severely Immunocompromised	
	Doses	Interval Between Doses†	Doses	Interval Between Doses
6 months through 5 years	**Primary series‡: MONOVALENT VACCINE** (Blue capped vial with magenta-bordered label)			
	Dose 1 to 2	At least 4–8 weeks§	Dose 1 to 2	At least 4 weeks
			Dose 2 to 3	At least 4 weeks
	Booster dose¶: BIVALENT VACCINE (Dark pink capped vial with yellow-bordered label)			
	Dose 2 to 3	At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)
6 through 11 years	**Primary series**** : **MONOVALENT VACCINE** (Blue capped vial with purple-bordered label)			
	Dose 1 to 2	At least 4–8 weeks§	Dose 1 to 2	At least 4 weeks
			Dose 2 to 3	At least 4 weeks
	Booster dose: BIVALENT VACCINE (Blue capped vial with gray-bordered label)			
	Dose 2 to 3	At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)
12 through 17 years	**Primary series**: MONOVALENT VACCINE** (Red capped vial with blue-bordered label)			
	Dose 1 to 2	At least 4–8 weeks§	Dose 1 to 2	At least 4 weeks
			Dose 2 to 3	At least 4 weeks
	Booster dose: BIVALENT VACCINE (Blue capped vial with gray-bordered label)			
	Dose 2 to 3	At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)

* Guidance related to special situations when vaccinating children, such as those who have a birthday before completing the primary series or booster dose, see Special Situations for COVID-19 Vaccination of Children and Adolescents

† Persons with a recent SARS-CoV-2 infection may consider delaying a primary series or booster dose by 3 months from symptom onset or positive test (if infection was asymptomatic).

‡ Complete primary series with the same manufacturer's product. If the previously administered products are unknown, not available, contraindicated or a mixed manufacturer-product series (Pfizer-BioNTech and Moderna vaccines), follow a 3-dose schedule. A third dose of either a monovalent Moderna vaccine or a bivalent Pfizer-BioNTech vaccine should be administered at least 8 weeks after the second dose to complete the primary series. These children cannot receive any booster dose.

§ An 8-week interval between the first and second primary series doses of Moderna, Novavax, and Pfizer-BioNTech COVID-19 vaccines may be optimal for some people ages 6 months–64 years, especially for males ages 12–39 years, as it may reduce the small risk of myocarditis and pericarditis associated with these vaccines. The authorized interval (4 weeks for Moderna COVID-19 Vaccine) between the first and second doses remains the recommended interval for people who are moderately or severely immunocompromised; adults ages 65 years and older; and in situations in which there is increased concern about COVID-19 community levels or an individual's higher risk of severe disease.

¶ Children 5 years of age who completed a primary series of Moderna COVID-19 Vaccine, may receive either bivalent Moderna or Pfizer-BioNTech COVID-19 vaccine for the booster dose.

** Complete the primary series with same manufacturer's product. If the vaccine product previously administered cannot be determined or is no longer available, complete a 2-dose series with a monovalent mRNA vaccine at least 28 days (4 weeks) between Dose 1 and 2. Administer bivalent mRNA COVID-19 vaccine at least 8 weeks (2 months) after Dose 2.

COVID-19 Vaccine

Interim COVID-19 Immunization Schedule for Persons 6 Months of Age and Older

Table 1b. **Pfizer-BioNTech: Immunization Schedule for Children 6 Months through 17 Years of Age**

Age*	For Most People		Those Who **ARE** Moderately or Severely Immunocompromised	
	Doses	Interval Between Doses†	Doses	Interval Between Doses
6 months through 4 years	**Primary series‡: MONOVALENT VACCINE - Doses 1 and 2** (Maroon capped vial with maroon-bordered label) and **BIVALENT VACCINE - Dose 3** (Maroon capped vial with maroon-bordered label)			
	Dose 1 to 2	At least 3–8 weeks§	Dose 1 to 2	At least 3 weeks
	Doses 2 and 3	At least 8 weeks (2 months)	Dose 2 to 3	At least 8 weeks
5 through 11 years	**Primary series¶: MONOVALENT VACCINE** (Orange capped vial with orange-bordered label)			
	Dose 1 to 2	At least 3–8 weeks§	Dose 1 to 2	At least 3 weeks
			Dose 2 to 3	At least 4 weeks
	Booster dose: BIVALENT VACCINE (Orange capped vial with orange-bordered label)			
	Dose 2 to 3	At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)
12 years through 17 years	**Primary series¶: MONOVALENT VACCINE** (Gray capped vial with gray-bordered label)			
	Dose 1 to 2	At least 3-8 weeks§	Dose 1 to 2	At least 3 weeks
			Dose 2 to 3	At least 4 weeks
	Booster dose: BIVALENT VACCINE (Gray capped vial with gray-bordered label)			
	Dose 2 to 3	At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)

* Guidance related to special situations when vaccinating children, such as those who have a birthday before completing the primary series or booster dose, see Special Situations for COVID-19 Vaccination of Children and Adolescents

† Persons with a recent SARS-CoV-2 infection may consider delaying a primary series or booster dose by 3 months from symptom onset or positive test (if infection was asymptomatic).

‡ Complete primary series with the same manufacturer's product. If the previously administered products are unknown, not available, contraindicated or a mixed manufacturer-product series (Pfizer-BioNTech and Moderna vaccines), follow a 3-dose schedule. A third dose of either a monovalent Moderna vaccine or a bivalent Pfizer-BioNTech vaccine should be administered at least 8 weeks after the second dose to complete the primary series. These children cannot receive any booster dose.

§ An 8-week interval between the first and second primary series doses of Moderna, Novavax, and Pfizer-BioNTech COVID-19 vaccines may be optimal for some people ages 6 months–64 years, especially for males ages 12–39 years, as it may reduce the small risk of myocarditis and pericarditis associated with these vaccines. The authorized interval (3 weeks for Pfizer-BioNTech COVID-19 vaccine) between the first and second doses remains the recommended interval for people who are moderately or severely immunocompromised; adults ages 65 years and older; and in situations in which there is increased concern about COVID-19 community levels or an individual's higher risk of severe disease.

¶ Complete the primary series with same manufacturer's product. If the vaccine product previously administered cannot be determined or is no longer available, complete a 2-dose series with a monovalent mRNA vaccine at least 28 days (4 weeks) between Dose 1 and 2. Administer bivalent mRNA COVID-19 vaccine at least 8 weeks (2 months) after Dose 2.

CDC Resources

CDC COVID-19 vaccine clinical training and materials

CDC Interim Clinical Considerations for the Use of COVID-19 Vaccines Currently Approved or Authorized in the United States

CDC Vaccine administration clinical materials

CDC Vaccine Storage and Handling Toolkit

Table 1c. **Novavax: Immunization Schedule for Children 6 Months through 17 Years of Age**

Age*	For Most People		Those Who **ARE** Moderately or Severely Immunocompromised	
	Doses	Interval Between Doses†	Doses	Interval Between Doses
12 years and older	**Primary series‡: MONOVALENT VACCINE**			
	Dose 1 to 2	At least 3–8 weeks§	Dose 1 to 2	At least 3 weeks
	Booster dose: BIVALENT mRNA VACCINE Moderna or Pfizer-BioNTech bivalent COVID-19 vaccine should be used for the booster dose.			
	Dose 2 to 3	At least 8 weeks (2 months)	Dose 2 to 3	At least 8 weeks (2 months)

* Guidance related to special situations when vaccinating children, such as those who have a birthday before completing the primary series or booster dose, see Special Situations for COVID-19 Vaccination of Children and Adolescents

† Persons with a recent SARS-CoV-2 infection may consider delaying a primary series or booster dose by 3 months from symptom onset or positive test (if infection was asymptomatic).

‡ Complete the primary series with same manufacturer's product. If the vaccine product previously administered cannot be determined or is no longer available, complete a 2-dose series with a monovalent vaccine at least 28 days (4 weeks) between Dose 1 and 2. Administer bivalent mRNA COVID-19 vaccine at least 8 weeks (2 months) after Dose 2.

§ An 8-week interval between the first and second primary series doses of Moderna, Novavax, and Pfizer-BioNTech COVID-19 vaccines may be optimal for some people ages 6 months–64 years, especially for males ages 12–39 years, as it may reduce the small risk of myocarditis and pericarditis associated with these vaccines. The authorized interval (3 weeks for Novavax COVID-19 vaccine) between the first and second doses remains the recommended interval for people who are moderately or severely immunocompromised; adults ages 65 years and older; and in situations in which there is increased concern about COVID-19 community levels or an individual's higher risk of severe disease.

CDC Resources

CDC COVID-19 vaccine clinical training and materials

CDC Interim Clinical Considerations for the Use of COVID-19 Vaccines Currently Approved or Authorized in the United States

CDC Vaccine administration clinical materials

CDC Vaccine Storage and Handling Toolkit

COVID-19 Vaccine

Interim COVID-19 Immunization Schedule for Persons 6 Months of Age and Older

Table 2. **Immunization Schedule for Persons 18 Years of Age**

Type	Age	For Most People		Those Who **ARE** Moderately or Severely Immunocompromised	
		Doses	Interval Between Doses*	Doses	Interval Between Doses
Moderna	**18 years and older**	**Primary series†: MONOVALENT VACCINE** (Red capped vial with a blue-bordered label)			
		Dose 1 to 2	At least 4–8 weeks‡	Dose 1 to 2	At least 4 weeks
				Dose 2 to 3	At least 4 weeks
		Booster dose§: BIVALENT VACCINE (Blue capped vial with a gray-bordered label)			
		Dose 2 to 3	At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)
Pfizer-BioNTech	**18 years and older**	**Primary series†: MONOVALENT VACCINE** (Gray capped vial with a gray-bordered label)			
		Dose 1 to 2	At least 3-8 weeks‡	Dose 1 to 2	At least 3 weeks
				Dose 2 to 3	At least 4 weeks
		Booster dose§: BIVALENT VACCINE (Gray capped vial with a gray-bordered label)			
		Dose 2 to 3	At least 8 weeks (2 months)	Dose 3 to 4	At least 8 weeks (2 months)
Novavax	**18 years and older**	**Primary series†: MONOVALENT VACCINE**			
		Dose 1 to 2	At least 3–8 weeks‡	Dose 1 to 2	At least 3 weeks
		Booster dose§: BIVALENT VACCINE Moderna or Pfizer-BioNTech bivalent COVID-19 vaccine should be used for the booster dose.			
		Dose 2 to 3	At least 8 weeks (2 months)	Dose 2 to 3	At least 8 weeks (2 months)
Janssen	**18 years and older**	**Primary series: MONOVALENT VACCINE** Janssen COVID-19 vaccine is authorized for use in certain limited situations due to safety considerations.¶			
		Booster dose§: BIVALENT mRNA VACCINE Moderna or Pfizer-BioNTech bivalent COVID-19 vaccine should be used for the booster dose.			
		Administer a single booster dose at least 8 weeks (2 months) after the previous dose.			

* Persons with a recent SARS-CoV-2 infection may consider delaying a primary series or booster dose by 3 months from symptom onset or positive test (if infection was asymptomatic).
† Complete the primary series with same product. If the vaccine product previously administered cannot be determined, is no longer available or contraindicated, any age-appropriate monovalent COVID-19 vaccine may be administered at least 28 days after the first dose to complete the primary series. Moderna or Pfizer-BioNTech bivalent COVID-19 vaccine can be administered for the booster dose, regardless of the primary series product.
‡ An 8-week interval between the first and second primary series doses of Moderna, Novavax, and Pfizer-BioNTech COVID-19 vaccines may be optimal for some people ages 6 months–64 years, especially for males ages 12–39 years, as it may reduce the small risk of myocarditis and pericarditis associated with these vaccines. A shorter interval (4 weeks for Moderna) between the first and second doses remains the recommended interval for people who are moderately or severely immunocompromised; adults ages 65 years and older; and in situations in which there is increased concern about COVID-19 community levels or an individual's higher risk of severe disease.
§ A single Novavax booster dose (instead of a bivalent mRNA booster dose) may be given to persons 18 years of age or older who have not received a previous booster dose in **limited situations**. These situations are 1. an mRNA vaccine is contraindicated, or not available or 2. the recipient is unwilling to receive an mRNA vaccine and would otherwise not receive a booster dose. Administer the booster dose at least 6 months after the last primary series dose.
¶ For guidance on use of Janssen vaccine and retrospective record review, scheduling and administration see Interim Clinical Considerations for Use of COVID-19 Vaccines: Appendix A

CDC Resources

CDC COVID-19 vaccine clinical training and materials

CDC Interim Clinical Considerations for the Use of COVID-19 Vaccines Currently Approved or Authorized in the United States

CDC Vaccine administration clinical materials

CDC Vaccine Storage and Handling Toolkit

COVID-19 Vaccine

Interim COVID-19 Immunization Schedule for Persons 6 Months of Age and Older

Table 3. **COVID-19 Vaccine Products Summary**

Type	Product	Age Indications**	Diluent	Use For:††	Dose/Injection Amount
mRNA vaccine	**MONOVALENT Moderna:** Blue capped vial with magenta-bordered label	6 months through 5 years	NONE	Any dose in the primary series	25 µg/ 0.25 mL
	BIVALENT Moderna: Dark pink capped vial with yellow-bordered label	6 months through 5 years	NONE	Booster dose	10 µg/ 0.2 mL
	MONOVALENT Moderna: Blue capped vial with purple-bordered label	6 through 11 years	NONE	Any dose in the primary series	50 µg/0.5 mL
	BIVALENT Moderna: Blue capped vial with gray-bordered label	6 through 11 years	NONE	Booster dose	25 µg/0.25 mL
	MONOVALENT Moderna: Red capped vial with blue- bordered label	12 years and older	NONE	Any dose in the primary series	100 µg/ 0.5 mL
	BIVALENT Moderna: Blue capped vial with gray-bordered label	12 years and older	NONE	Booster dose	50 µg/0.5 mL
	MONOVALENT Pfizer-BioNTech: Maroon capped vial with maroon-bordered label	6 months through 4 years	2.2 mL 0.9% sodium chloride (normal saline, preservative-free)	Primary series Doses 1 and 2	3 µg/0.2 mL
	BIVALENT Pfizer-BioNTech: Maroon capped vial with maroon-bordered label	6 months through 4 years	2.2 mL 0.9% sodium chloride (normal saline, preservative-free)	Primary series Dose 3	3 µg/0.2 mL
	MONOVALENT Pfizer-BioNTech: Orange capped vial with orange-bordered label	5 through 11 years	1.3 mL 0.9% sodium chloride (normal saline, preservative-free)	Any dose in the primary series	10 µg/0.2 mL
	BIVALENT PFIZER-BIONTECH Orange capped vial with a orange-bordered label	5 through 11 years	1.3 mL 0.9% sodium chloride (normal saline, preservative-free)	Booster dose	10 µg/0.2 mL
	MONOVALENT Pfizer-BioNTech: Gray capped vial with a gray- bordered label	12 years and older	NONE	Any dose in the primary series	30 µg/0.3 mL
	BIVALENT Pfizer-BioNTech: Gray capped vial with gray-bordered label Single-dose Vials and Multidose Vials	12 years and older	NONE	Booster dose	30 µg/0.3 mL
Protein sub unit vaccine	**MONOVALENTNovavax:** Royal blue capped vial	12 years and older	NONE	Any dose in the primary series or as a single booster dose, in **limited situations**, for persons 18 years of age or older	5 µg rS and 50 µg of Matrix-M™ adjuvant/0.5 mL
Viral vector vaccine	**MONOVALENT Janssen:** Blue capped vial	18 years and older	NONE	Janssen COVID-19 vaccine is authorized for use in certain **limited situations** due to safety considerations‡‡	5×1010 viral particles/0.5 mL

** Administer the appropriate vaccine product based on the recipient's age and the vaccine product's indications.
†† COVID-19 vaccines may be administered on the same day as other routinely recommended vaccines, including influenza vaccine.
‡‡ For guidance on use of Janssen vaccine and retrospective record review, scheduling and administration see Interim Clinical Considerations for Use of COVID-19 Vaccines: Appendix A

470 IAC 3-4.1-12
Health Requirements

Sec. 12

(F) immunizations (see subsection (a)(2), Immunization Requirements:)

(2) Immunization Requirements. All children enrolled in day nurseries (unless meeting criteria for exceptions specified in subsection (a)(3), Exceptions) shall be immunized against diphtheria, tetanus, whooping cough, poliomyelitis, measles, mumps, and rubella.
For those diseases listed above, the adequate immunizing doses and the child's age for administering each vaccine shall be those recommended by the American Academy of Pediatrics or by the United States Public Health Service Immunization Practices Advisory Committee. Guidelines for the interpretation of recommendations shall be issued by the SBH.

Adequate documentation of an immunization history shall consist of:
(A) a physician's certificate including the number and dates of doses administered, if available or;
(B) immunization records forwarded from a school corporation or day nursery including the number and dates of doses administered; or
(C) a record maintained by the parent showing the month and year during which each dose of vaccine was administered.
Annual reports shall be made to the SBH by the day nursery. They shall be submitted on forms prescribed and provided by the SBH for that purpose.
(3) Exceptions. If any physician certifies that a particular immunization required in subsection (a)(2), Immunization Requirements, is or may be detrimental to the child's health, the requirements for that particular immunization are not applicable for that child until it is found no longer detrimental to the child's health.

If the local health department or a physician determines that the child's immunization schedule has been delayed due to extreme circumstances, the parent of the child shall furnish this written statement and a time schedule, approved by a physician or the local health department, for the completion of the remainder of the immunizations. The child may not attend the day nursery until this written statement is on file with the day nursery.

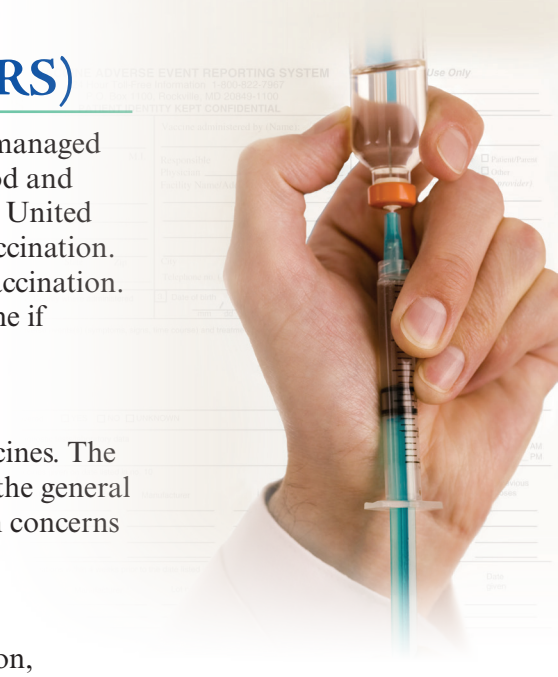
Annual tuberculin testing is not required.

VAERS

Vaccine Adverse Event Reporting System

A National Program for Monitoring Vaccine Safety

Vaccine Adverse Event Reporting System (VAERS)



The Vaccine Adverse Event Reporting System (VAERS), is a national program managed by the U.S. Centers for Disease Control and Prevention (CDC) and the U.S. Food and Drug Administration (FDA) to monitor the safety of all vaccines licensed in the United States. VAERS collects and reviews reports of adverse events that occur after vaccination. An "adverse event" is any health problem or "side effect" that happens after a vaccination. VAERS cannot determine if a vaccine caused an adverse event, but can determine if further investigation is needed.

VAERS provides valuable information

VAERS is an early-warning system that detects problems possibly related to vaccines. The system relies on reports from healthcare providers*, vaccine manufacturers, and the general public. Reporting gives CDC and FDA important information to identify health concerns and ensure vaccines are safe in order to protect the public's health.

VAERS staff evaluate reports of adverse events

VAERS defines a "serious adverse event" as life-threatening illness, hospitalization, prolongation of an existing hospitalization, permanent disability or death. Once adverse events are identified using VAERS, they may be monitored in other immunization safety systems to confirm if a particular adverse event is related to a vaccination and identify any specific risk factors.

Anyone can report to VAERS

Anyone can submit a report to VAERS, including patients, family members, healthcare providers, vaccine manufacturers and the general public. CDC and FDA encourage anyone who experiences an adverse event after receiving a vaccine to report to VAERS.

How to report to VAERS

You can report to VAERS online at https://vaers.hhs.gov/index.

For further assistance reporting to VAERS, visit https://vaers.hhs.gov/index or contact VAERS directly at info@VAERS.org or 1-800-822-7967.

VAERS data are available to the public

VAERS data can be downloaded at https://vaers.hhs.gov/data/index or searched at http://wonder.cdc.gov/vaers.html. Privacy is protected and personal identifying information (such as name, date of birth and address) is removed from the public data.

For more information about VAERS:

E-mail: info@vaers.org

Phone: 1-800-822-7967

Web site: www.vaers.hhs.gov

*Healthcare providers are encouraged to report all clinically significant adverse events after vaccination to VAERS even if it is uncertain whether the vaccine caused the event. They are also required to report to VAERS adverse events found in the Reportable Events Table (RET) at https://vaers.hhs.gov/resources/VAERS_Table_of_Reportable_Events_Following_Vaccination.pdf

FACT SHEET

CS267401

VAERS Table of Reportable Events Following Vaccination*	
Vaccine/Toxoid	**Event and interval** from vaccination**
Tetanus in any combination; DTaP, DTP, DTP-Hib, DT, Td, TT, Tdap, DTaP-IPV, DTaP-IPV/Hib, DTaP-HepB-IPV	A. Anaphylaxis or anaphylactic shock (7 days) B. Brachial neuritis (28 days) C. Shoulder Injury Related to Vaccine Administration (7 days) D. Vasovagal syncope (7 days) E. Any acute complications or sequelae (including death) of above events (interval - not applicable) F. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Pertussis in any combination; DTaP, DTP, DTP-Hib, Tdap, DTaP-IPV, DTaP-IPV/Hib, DTaP-HepB-IPV	A. Anaphylaxis or anaphylactic shock (7 days) B. Encephalopathy or encephalitis (7 days) C. Shoulder Injury Related to Vaccine Administration (7 days) D. Vasovagal syncope (7 days) E. Any acute complications or sequelae (including death) of above events (interval - not applicable) F. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Measles, mumps and rubella in any combination; MMR, MMRV, MM	A. Anaphylaxis or anaphylactic shock (7 days) B. Encephalopathy or encephalitis (15 days) C. Shoulder Injury Related to Vaccine Administration (7 days) D. Vasovagal syncope (7 days) E. Any acute complications or sequelae (including death) of above events (interval - not applicable) F. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Rubella in any combination; MMR, MMRV	A. Chronic arthritis (42 days) B. Any acute complications or sequelae (including death) of above event (interval - not applicable) C. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Measles in any combination; MMR, MMRV, MM	A. Thrombocytopenic purpura (7-30 days) B. Vaccine-strain measles viral infection in an immunodeficient recipient o Vaccine-strain virus identified (interval - not applicable) o If strain determination is not done or if laboratory testing is inconclusive (12 months) C. Any acute complications or sequelae (including

VAERS Table of Reportable Events Following Vaccination*	
Vaccine/Toxoid	**Event and interval** from vaccination**
	death) of above events (interval - not applicable) D. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Oral Polio (OPV)	A. Paralytic polio o in a non-immunodeficient recipient (30 days) o in an immunodeficient recipient (6 months) o in a vaccine-associated community case (interval - not applicable) B. Vaccine-strain polio viral infection o in a non-immunodeficient recipient (30 days) o in an immunodeficient recipient (6 months) o in a vaccine-associated community case (interval - not applicable) C. Any acute complication or sequelae (including death) of above events (interval - not applicable) D. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Inactivated Polio in any combination-IPV, DTaP-IPV, DTaP-IPV/Hib, DTaP-HepB-IPV	A. Anaphylaxis or anaphylactic shock (7 days) B. Shoulder Injury Related to Vaccine Administration (7 days) C. Vasovagal syncope (7 days) D. Any acute complication or sequelae (including death) of the above event (interval - not applicable) E. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Hepatitis B in any combination- HepB, HepA-HepB, DTaP-HepB-IPV, Hib-HepB	A. Anaphylaxis or anaphylactic shock (7 days) B. Shoulder Injury Related to Vaccine Administration (7 days) C. Vasovagal syncope (7 days) D. Any acute complications or sequelae (including death) of the above event (interval - not applicable) E. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Haemophilus influenzae type b in any combination (conjugate)- Hib, Hib-HepB, DTaP-IPV/Hib, Hib-MenCY	A. Shoulder Injury Related to Vaccine Administration (7 days) B. Vasovagal syncope (7 days) C. Any acute complication or sequelae (including death) of above events (interval - not applicable) D. Events described in manufacturer's package insert as contraindications to additional doses of vaccine

VAERS Table of Reportable Events Following Vaccination*	
Vaccine/Toxoid	**Event and interval** from vaccination**
	(interval - see package insert)
Varicella in any combination- VAR, MMRV	A. Anaphylaxis or anaphylactic shock (7 days) B. Disseminated varicella vaccine-strain viral disease. o Vaccine-strain virus identified (time interval unlimited) o If strain determination is not done or if laboratory testing is inconclusive (42 days) C. Varicella vaccine-strain viral reactivation (time interval unlimited) D. Shoulder Injury Related to Vaccine Administration (7 days) E. Vasovagal syncope (7 days) F. Any acute complication or sequelae (including death) of above events (interval - not applicable) G. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Rotavirus (monovalent or pentavalent) RV1, RV5	A. Intussusception (21 days) B. Any acute complication or sequelae (including death) of above events (interval - not applicable) C. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Pneumococcal conjugate(7-valent or 13-valent) PCV7, PCV13	A. Shoulder Injury Related to Vaccine Administration (7 days) B. Vasovagal syncope (7 days) C. Any acute complication or sequelae (including death) of above events (interval - not applicable) D. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Hepatitis A in any combination- HepA, HepA-HepB	A. Shoulder Injury Related to Vaccine Administration (7 days) B. Vasovagal syncope (7 days) C. Any acute complication or sequelae (including death) of above events (interval - not applicable) D. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Seasonal influenza--trivalent inactivated influenza, quadrivalent inactivated influenza, live attenuated	A. Anaphylaxis or anaphylactic shock (7 days) B. Shoulder Injury Related to Vaccine Administration (7 days) C. Vasovagal syncope (7 days)

VAERS Table of Reportable Events Following Vaccination*	
Vaccine/Toxoid	**Event and interval** from vaccination**
influenza-IIV, IIV3, IIV4, RIV3, ccIIV3, LAIV4	D. Guillain-Barré Syndrome (42 days) E. Any acute complication or sequelae (including death) of above events (interval - not applicable) F. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Meningococcal - MCV4, MPSV4, Hib-MenCY, MenACWY, MenB	A. Anaphylaxis or anaphylactic shock (7 days) B. Shoulder Injury Related to Vaccine Administration. (7 days) C. Vasovagal syncope (7 days) D. Any acute complication or sequelae (including death) of above events (interval - not applicable) E. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Human Papillomavirus (Quadrivalent, Bivalent, or 9 valent) - 9vHPV4, 4vHPV, 2vHPV	A. Anaphylaxis or anaphylactic shock (7days) B. Shoulder Injury Related to Vaccine Administration (7 days) C. Vasovagal syncope (7 days) D. Any acute complication or sequelae (including death) of above events (interval - not applicable) E. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)
Any new vaccine recommended by the Centers for Disease Control and Prevention for routine administration to children	A. Shoulder Injury Related to Vaccine Administration (7 days) B. Vasovagal syncope (7 days) C. Any acute complication or sequelae (including death) of above events (interval - not applicable) D. Events described in manufacturer's package insert as contraindications to additional doses of vaccine (interval - see package insert)

* Effective date: March 21, 2017. The Reportable Events Table (RET) reflects what is reportable by law (42 USC 300aa-25) to the Vaccine Adverse Event Reporting System (VAERS) including conditions found in the manufacturer package insert. In addition, healthcare professionals are encouraged to report any clinically significant or unexpected events (even if not certain the vaccine caused the event) for any vaccine, whether or not it is listed on the RET. Manufacturers are also required by regulation (21CFR 600.80) to report to the VAERS program all adverse events made known to them for any vaccine.

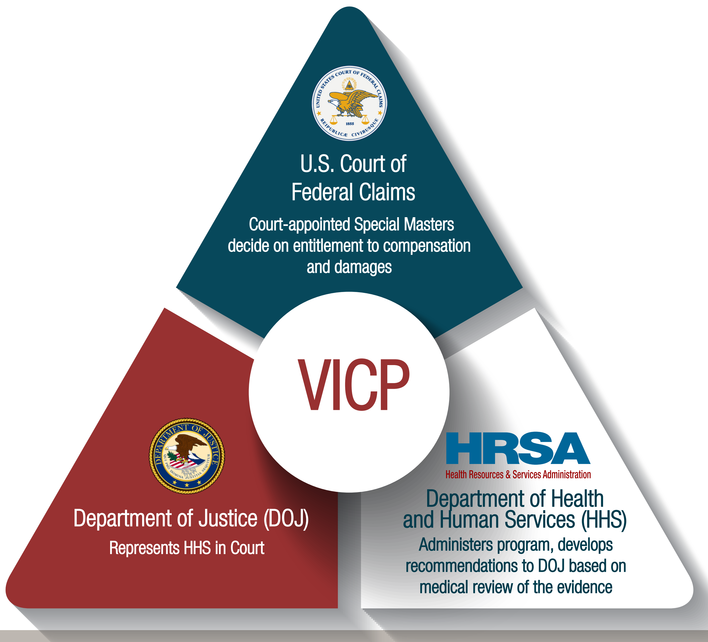
Note that the RET differs from the Vaccine Injury Table (VIT) regarding timeframes of adverse events. Timeframes listed on the RET reflect what is required for reporting, but not what is required for compensation. To view timeframes for compensation, please see the VIT at

VAERS Table of Reportable Events Following Vaccination*	
Vaccine/Toxoid	**Event and interval** from vaccination**
https://www.hrsa.gov/vaccinecompensation/vaccineinjurytable.pdf **Represents the onset interval between vaccination and the adverse event. For a detailed explanation of terms, see the Vaccine Injury Table at **https://www.hrsa.gov/vaccinecompensation/vaccineinjurytable.pdf**	

A list of vaccine abbreviations is located at: **https://www.cdc.gov/vaccines/terms/vacc-abbrev.html**

THE NATIONAL VACCINE INJURY COMPENSATION PROGRAM (VICP)

VICP ROLES



PURPOSE OF VICP

To ensure that individuals injured by certain vaccines are provided with fair and efficient compensation

To ensure a stable vaccine supply by limiting liability for vaccine manufacturers and vaccine administrators

COVERED VACCINES[1]

- Diphtheria, Tetanus, Pertussis (e.g. DTaP, Tdap, DT, TT and Td)
- Haemophilus influenzae type b
- Hepatitis A
- Hepatitis B
- Human papillomavirus
- Seasonal Influenza (e.g. IIV3, IIV4, RIV3, LAIV4)[2]
- Measles, Mumps and Rubella (e.g. MMR, MR, M, R)
- Meningococcal
- Pneumococcal conjugate
- Polio (e.g. IPV and OPV)
- Rotavirus
- Varicella (e.g. VZV, MMRV)

VICP FACTS

COMPENSATION

- Over 5,000 petitions compensated[3]
- Average time filing to payment is 2-3 years
- Includes attorneys' fees and cost

VACCINE MARKET STABILIZATION

- Supply shortages reduced
- New products being licensed
- Pricing stabilized

ALTERNATIVE TO CIVIL LITIGATION

- No fault program, limited discovery, short, informal hearings
- Reduced number of claims filed annually against vaccine companies

http://www.HRSA.gov/VaccineCompensation

[1] Recommended by CDC for routine use in children and pregnant women and subject to an excise tax by federal law.
[2] Seasonal (e.g. trivalent, quadrivalent, inactivated, live attenuated and recombinant vaccines) only.
[3] Most recent number of petitions compensated are available on the VICP website.

HRSA
Health Resources & Services Administration

You Must Provide Patients with Vaccine Information Statements (VISs) – It's Federal Law!

What are Vaccine Information Statements (VISs)?

Vaccine Information Statements (VISs) are documents produced by the Centers for Disease Control and Prevention (CDC), in consultation with panels of experts and parents, to properly inform vaccinees (or their parents/legal representatives) about the risks and benefits of each vaccine. VISs are not meant to replace interactions with healthcare providers, who should address any questions or concerns that the vaccinee (or parent/legal representative) may have.

Using VISs is legally required!

Federal law (under the National Childhood Vaccine Injury Act) requires a healthcare professional to provide a copy of the current VIS to an adult patient or to a child's parent/legal representative before vaccinating an adult or child with a dose of the following vaccines: diphtheria, tetanus, pertussis, measles, mumps, rubella, polio, hepatitis A, hepatitis B, *Haemophilus influenzae* type b (Hib), influenza, pneumococcal conjugate, meningococcal, rotavirus, human papillomavirus (HPV), or varicella (chickenpox).

Where to get VISs

All available VISs can be downloaded from the websites of Immunize.org at www.immunize.org/vis or CDC at www.cdc.gov/vaccines/hcp/vis/index.html. Ready-to-copy versions may also be available from your state or local health department.

Translations: You can find VISs in more than 40 languages on the Immunize.org website at www.immunize.org/vis.

To obtain translations of VIS in languages other than English, go to www.immunize.org/vis.

According to CDC, the appropriate VIS must be given:

- Prior to the vaccination (and prior to each dose of a multi-dose series);
- Regardless of the age of the vaccinee;
- Regardless of whether the vaccine is given in a public or private healthcare setting.

Top 10 Facts About VISs

FACT 1 It's federal law! You must provide current* VISs to all your patients before vaccinating them.

Federal law requires that VISs must be used for patients of **ALL ages** when administering these vaccines:

- DTaP (includes DT)
- Td and Tdap
- hepatitis A
- hepatitis B
- Hib
- HPV
- influenza (inactivated and live, intranasal)
- MMR and MMRV
- meningococcal (MenACWY, MenB)
- pneumococcal conjugate
- polio
- rotavirus
- varicella (chickenpox)

For the vaccines not covered under the National Childhood Vaccine Injury Act (i.e., adenovirus, anthrax, dengue, ebola, Japanese encephalitis, pneumococcal polysaccharide, rabies, smallpox/monkeypox, typhoid, yellow fever, and zoster), providers are not required by federal law to use VISs unless they have been purchased under CDC contract. However, CDC recommends that VISs be used whenever these vaccines are given.

*Federal law allows up to 6 months for a new VIS to be used.

FACT 2 VISs can be given to patients in a variety of ways.

In most medical settings, VISs are provided to patients (or their parents/legal representatives) in paper form. However, VISs also may be provided using electronic media. Regardless of the format used, the goal is to provide a current VIS just prior to vaccination.

CONTINUED ON THE NEXT PAGE ▶

Most current versions of VISs (table)

As of November 14, 2022, the most recent versions of the VISs are as follows:

Adenovirus	1/8/20	**MMRV**	8/6/21
Anthrax	1/8/20	**Multi-vaccine**	10/15/21
Cholera	10/30/19	**PCV**	2/4/22
Dengue	12/17/21	**PPSV23**	10/30/19
DTaP	8/6/21	**Polio**	8/6/21
Ebola	6/30/22	**Rabies**	6/2/22
Hepatitis A	10/15/21	**Rotavirus**	10/15/21
Hepatitis B	10/15/21	**Smallpox/monkeypox**	11/14/22
Hib	8/6/21	**Td**	8/6/21
HPV	8/6/21	**Tdap**	8/6/21
Influenza	8/6/21	**Typhoid**	10/30/19
Japanese enceph	8/15/19	**Varicella**	8/6/21
MenACWY	8/6/21	**Yellow fever**	4/1/20
MenB	8/6/21	**Zoster**	2/4/22
MMR	8/6/21		

A handy list of current VIS dates is also available at www.immunize.org/catg.d/p2029.pdf.

(For information on special circumstances involving vaccination of a child when a parent/legal representative is not available at the time of vaccination, see CDC's *VIS Frequently Asked Questions* at www.cdc.gov/vaccines/hcp/vis/about/vis-faqs.html.)

Prior to vaccination, VIS may be:

- Provided as a paper copy
- Offered on a permanent, laminated office copy
- Downloaded by the vaccinee (parent/legal representative) to a smartphone or other electronic device (VISs have been specially formatted for this purpose)
- Made available to be read before the office visit, e.g., by giving the patient or parent a copy to take home during a prior visit, or telling them how to download or view a copy from the Internet. These patients must still be offered a copy in one of the formats described previously to read during the immunization visit, as a reminder.

Regardless of the way the patient is given the VIS to read, providers must still offer a copy (which can be an electronic copy) of each appropriate VIS to take home following the vaccination. However, the vaccinee may decline.

FACT 3 VISs are required in both public and private sector healthcare settings.

Federal law requires the use of VISs in both public and private sector settings, regardless of the source of payment for the vaccine.

FACT 4 You must provide a current VIS *before* a vaccine is administered to the patient.

A VIS provides information about the disease and the vaccine and must be given to the patient **before** a vaccine is administered. It is also acceptable to hand out the VIS well before administering vaccines (e.g., at a prenatal visit or at birth for vaccines an infant will receive during infancy), as long as you still provide a current VIS right before administering vaccines.

FACT 5 You must provide a current VIS for *each* dose of vaccine you administer.

The most current VIS must be provided before **each dose** of vaccine is given, including vaccines given as a series of doses. For example, if 5 doses of a single vaccine are required (e.g., DTaP), the patient (parent/legal representative) must have the opportunity to read the information on the VIS before each dose is given.

FACT 6 You must provide VISs whenever you administer combination vaccines.

If you administer a combination vaccine that does not have a stand-alone VIS (e.g., Kinrix, Quadracel, Pediarix, Pentacel, Twinrix) you should provide the patient with individual VISs for the component vaccines, or use the Multi-Vaccine VIS.

The Multi-Vaccine VIS may be used in place of the individual VISs for DTaP, Hib, hepatitis B, polio, and pneumococcal when two or more of these vaccines are administered during the same visit. It may be used for infants as well as children through 6 years of age. The Multi-Vaccine VIS should not be used for adolescents or adults.

FACT 7 VISs should be given in a language / format that the recipient can understand, whenever possible.

For patients who don't read or speak English, the law requires that providers ensure all patients (parent/legal representatives) receive a VIS, regardless of their ability to read English. To obtain VISs in more than 40 languages, visit the Immunize.org website at www.immunize.org/vis. Providers can supplement VISs with visual presentations or oral explanations as needed.

FACT 8 Federal law does not require signed consent in order for a person to be vaccinated.

Signed consent is not required by federal law for vaccination (although some states may require it).

FACT 9 To verify that a VIS was given, providers must record in the patient's medical record (or permanent office log or file) the following information:

- The edition date of the VIS (found on the back at the right bottom corner)
- The date the VIS is provided (i.e., the date of the visit when the vaccine is administered)

In addition, providers must record:

- The office address and name and title of the person who administers the vaccine
- The date the vaccine is administered
- The vaccine manufacturer and lot number

FACT 10 VISs should not be altered before giving them to patients, but you can add some information.

Providers should not change a VIS or write their own VISs. However, it is permissible to add a practice's name, address, and contact information to an existing VIS.

Additional resources on VISs and their use are available from the following organizations:

Immunize.org

- *VIS general information and translations in more than 40 languages:* www.immunize.org/vis
- *Current Dates of Vaccine Information Statements:* www.immunize.org/catg.d/p2029.pdf

Centers for Disease Control and Prevention

- *VIS website:* www.cdc.gov/vaccines/hcp/vis
- *VIS Facts:* www.cdc.gov/vaccines/hcp/vis/about/facts-vis.html
- *VIS FAQs:* www.cdc.gov/vaccines/hcp/vis/about/vis-faqs.html

Indiana State Department of Health

OFFICIAL IMMUNIZATION RECORD

Name _____ Birth Date _____

Parent's Name _____

Vaccine	Antigen(s)	Maker	Date (mm/dd/yy)	Provider Signature
Hepatitis B e.g., HepB, HepB-Hib, DTaP-HepB-IPV				
Diptheria, Tetanus, Pertussis e.g., DTaP, DT, DTaP-Hib, DTaP-HepB-IPV				
Td, Tdap				
Haemophilus influenzae type B e.g., Hib, HepB-Hib, DTaP-Hib				
Polio e.g., IPV, DTaP-HepB-IPV				
Pneumococcal PCV (conjugate) PPV (poly-saccharide)				

Indiana State Department of Health

OFFICIAL IMMUNIZATION RECORD

Name _____ Birth Date _____

Parent's Name _____

Vaccine	Antigen(s)	Maker	Date (mm/dd/yy)	Provider Signature
Hepatitis B e.g., HepB, HepB-Hib, DTaP-HepB-IPV				
Diptheria, Tetanus, Pertussis e.g., DTaP, DT, DTaP-Hib, DTaP-HepB-IPV				
Td, Tdap				
Haemophilus influenzae type B e.g., Hib, HepB-Hib, DTaP-Hib				
Polio e.g., IPV, DTaP-HepB-IPV				
Pneumococcal PCV (conjugate) PPV (poly-saccharide)				

Indiana State Department of Health

OFFICIAL IMMUNIZATION RECORD

Name _____ Birth Date _____

Parent's Name _____

Vaccine	Antigen(s)	Maker	Date (mm/dd/yy)	Provider Signature
Hepatitis B e.g., HepB, HepB-Hib, DTaP-HepB-IPV				
Diptheria, Tetanus, Pertussis e.g., DTaP, DT, DTaP-Hib, DTaP-HepB-IPV				
Td, Tdap				
Haemophilus influenzae type B e.g., Hib, HepB-Hib, DTaP-Hib				
Polio e.g., IPV, DTaP-HepB-IPV				
Pneumococcal PCV (conjugate) PPV (poly-saccharide)				

Measles, Mumps, Rubella e.g., MMR, MMRV				
Varicella e.g., Var, MMRV				
Hepatitis A HepA				
Meningococcal MCV4 (conjugate) MPSV4				
Rotavirus				
Human Papillomavirus (HPV)				
Influenza TIV (inactivated) LAIV (live, attenuated)				
Other				

SF 23214 (R13 / 5-08)

Measles, Mumps, Rubella e.g., MMR, MMRV				
Varicella e.g., Var, MMRV				
Hepatitis A HepA				
Meningococcal MCV4 (conjugate) MPSV4				
Rotavirus				
Human Papillomavirus (HPV)				
Influenza TIV (inactivated) LAIV (live, attenuated)				
Other				

SF 23214 (R13 / 5-08)

Measles, Mumps, Rubella e.g., MMR, MMRV				
Varicella e.g., Var, MMRV				
Hepatitis A HepA				
Meningococcal MCV4 (conjugate) MPSV4				
Rotavirus				
Human Papillomavirus (HPV)				
Influenza TIV (inactivated) LAIV (live, attenuated)				
Other				

SF 23214 (R13 / 5-08)

PATIENT ELIGIBILITY SCREENING RECORD

State Form 48514 (R3 / 3-11)
Indiana State Department of Health, Immunization Division

INSTRUCTIONS:
1. *A record of all children eighteen (18) years of age or younger who receive immunizations must be kept in the health care provider's office.*
2. *The record may be completed by the parent, guardian, or individual of record or by the health care provider.*
3. *Complete all information in section A at the initial screening visit.*
4. *Log the screening date and initial the appropriate eligibility category below for each vaccination.*

A. Patient Information

Child's Name _____ Child's Date of Birth *(month, day, year)* _____

Primary Provider's Name _____

B. Initial Patient Eligibility Screening

Date *(month, day, year)* _____ Initial Screening Record Completed By _____
(Parent/Guardian/Individual of Record/Healthcare Provider)

- ☐ **Medicaid** A child who has any form of Medicaid insurance.
- ☐ **American Indian/Alaskan Native** A child who identifies as an American Indian or Alaskan Native, regardless of insurance.
- ☐ **No Health Insurance** A child who does **not** have health insurance.
- ☐ **Insurance Does Not Cover Vaccines** A child who has commercial (private) health insurance but the coverage does not include vaccines, children whose insurance covers only selected vaccines (these children are categorized as underinsured for non-covered vaccines only), or children whose insurance caps vaccine coverage at a certain amount (once that coverage amount is reached, these children are categorized as underinsured).
- ☐ **Fully Insured** A child who has health insurance which provides coverage for vaccines.

C. VFC eligibility screening must take place with each immunization visit to ensure the child's eligibility status has not changed. This same record can be used for the Initial Patient Eligibility Screening and all subsequent vaccinations. It is necessary to retain this or a similar record for each child receiving vaccine.

The record may be completed by the parent, guardian, or individual of record or by the health care provider.
Log the Screening Date, Status Change and Initial the appropriate eligibility category below for each vaccination.

Eligibility Screening Verification Date *(month, day, year)*	**Eligibility Status Change?**	**Medicaid**	**American Indian/Alaskan Native**	**No Health Insurance**	**Insurance Does Not Cover Vaccines**	**Fully Insured**
	☐ Yes ☐No					
	☐ Yes ☐No					
	☐ Yes ☐No					
	☐ Yes ☐No					
	☐ Yes ☐No					
	☐ Yes ☐No					
	☐ Yes ☐No					
	☐ Yes ☐No					
	☐ Yes ☐No					

REGISTRO DE EXAMEN DE APTITUD DEL PACIENTE

Formulario del Estado 55674 (9-14)
Departamento de Salud del estado de Indiana, División de Vacunación

INSTRUCCIONES:
1. *La oficina del proveedor de atención médica debe llevar un registro de todos los niños de hasta dieciocho (18) años que reciban vacunas.*
2. *El registro podrá completarlo el padre, tutor o persona registrada o por el proveedor de atención médica.*
3. *Complete toda la información de la Sección A durante la visita de examen inicial.*
4. *Registre la fecha del examen y marque la categoría de aptitud correspondiente para cada vacuna.*

A. Información del paciente

Nombre del niño _____ Fecha de nacimiento del niño *(mes, día, año)* _____

Nombre del proveedor principal _____

B. Examen inicial de aptitud del paciente

Fecha *(mes, día, año)* _____ Registro de examen inicial realizado por _____

(Padre/tutor/persona registrada/proveedor de atención médica)

- ☐ **Medicaid** Un niño que cuenta con algún tipo de seguro de Medicaid.
- ☐ **Amerindio/Nativo de Alaska** Un niño que se identifica como amerindio o nativo de Alaska, más allá de su seguro.
- ☐ **Ningún seguro de salud** Un niño que **no** cuenta con seguro de salud.
- ☐ **El seguro no cubre las vacunas** Un niño que cuenta con un seguro de salud comercial (privado), pero cuya cobertura no incluye vacunas; niños cuyo seguro cubre sólo ciertas vacunas (la situación de estos niños queda categorizada como con seguro insuficiente para vacunas no cubiertas solamente); o niños cuyo seguro pone un tope de un determinado monto a la cobertura de vacunación (una vez que se alcance el monto de la cobertura, la situación de estos niños se categoriza como con seguro insuficiente).
- ☐ **Completamente asegurado** Un niño que cuenta con seguro de salud que cubre la vacunación.

C. El examen de aptitud del Programa de Vacunas para Niños (VFC) debe realizarse con cada visita de vacunación para garantizar que la condición de aptitud del niño no se haya modificado.
Este mismo registro puede usarse para el Examen Inicial de Aptitud del Paciente y todas las vacunas posteriores. Es necesario conservar este u otro registro similar para cada niño que reciba una vacuna.

El registro podrá completarlo el padre, tutor, la persona registrada o el proveedor de atención médica.
Registre la fecha de examen, el cambio de estado y marque la categoría de aptitud correspondiente por cada vacuna.

Fecha de verificación del examen de aptitud *(mes, día, año)*	**¿Se modificó la condición de aptitud?**	**Medicaid**	**Amerindio/ Nativo de Alaska**	**Ningún seguro de salud**	**El seguro no cubre las vacunas**	**Completamente asegurado**
	☐ Sí ☐ No					
	☐ Sí ☐ No					
	☐ Sí ☐ No					
	☐ Sí ☐ No					
	☐ Sí ☐ No					
	☐ Sí ☐ No					
	☐ Sí ☐ No					
	☐ Sí ☐ No					
	☐ Sí ☐ No					

VFC ELIGIBILITY AND INSURANCE

**Patients must be screened for VFC eligibility at each visit*

Eligibility for Publicly Funded Vaccines Reference Guide for:

Vaccines for Children (VFC) providers, Adults Vaccine Program (AVP) providers, and Electronic Medical Record contacts.

Patient Status (<19 years old)	Eligible for Public Vaccine	IIS Eligibility Category Selection	IIS Eligibility Code & Description	IIS Funding Source and Description	Billing
American Indian/ Alaskan Native • Child is less than 19 years • As defined by the Indian Health Care Improvement Act (25 U.S.C 1603-13)	**Yes** Federal (VFC) vaccine eligible	American Indian/ Alaskan Native	V04 VFC eligible - American Indian/ Alaskan Native	VXCl - Publicly funded vaccine stock	• Cannot bill for the cost of the vaccine • Can bill administration fee up to $20.32 per dose • May issue only a single bill within 90 days • Cannot send to collections for unpaid administration fees
Uninsured • Child is less than 19 years • Does not have health insurance • Enrolled in a Health Care Sharing Ministry (i.e., MediShare, Liberty Healthshare, HealthShare Altura, Christian Healthcare Ministries, Solidarity Healthshare)	**Yes** Federal (VFC) vaccine eligible	Uninsured	V03 VFC eligible - Uninsured	VXCl - Publicly funded vaccine stock	• Cannot bill for the cost of the vaccine • Can bill administration fee up to $20.32 per dose • May issue only a single bill within 90 days • Cannot send to collections for unpaid administration fees
Underinsured Child • Child is less than 19 years • Has insurance that does not cover vaccine • Served at a Federally Qualified Health Center/ Rural Health Center (FQHC/RHC) or deputized Local Health Department (LHD)	**Yes** Federal (VFC) vaccine eligible	Underinsured	V05 VFC eligible - Underinsured	VXCl - Publicly funded vaccine stock	• Cannot bill for the cost of the vaccine • Can bill administration fee up to $20.32 per dose • May issue only a single bill within 90 days • Cannot send to collections for unpaid administration fees
Other • Child is less than 19 years • Has insurance that does not cover vaccine • Served at any non-FQHC or LHD VFC provider location	**Yes** Federal (VFC) vaccine eligible	Underinsured	V0S VFC eligible - Underinsured	VXCl - Publicly funded vaccine stock	• Cannot bill for the cost of the vaccine • Can bill administration fee up to $20.32 per dose • May issue only a single bill within 90 days • Cannot send to collections for unpaid administration fees

2023 Vaccines for Children (VFC) Eligibility Guide
Indiana Department of Health- Immunization Division

Indiana Family Services (FSSA) offers several different programs and services under the Indiana Health Coverage Programs (IHCP). Each IHCP member is issued a number referred to as the Member ID assigned by FSSA Division of Family Resources (DFR). They type of card received depends on the IHCP program in which the member is enrolled. Providers are required to verify member eligibility on the date of service via the Provider Healthcare portal. Providers that fail to verify eligibility are at risk of claims being denied due to membership ineligibility or coverage limitations.	**Viewing a member ID card alone does not ensure member eligibility.** • **Hoosier Health Cards are issued by FSSA DFR.** • **Hoosier Care Connect members receive member ID cards from their individuals Managed Care Entities (MCEs): Anthem or MHS** • **Hoosier Healthwise members receive member ID cards from their individual MCEs: Anthem, CareSource, MHS, and MDwise.** • **Package A (Medicaid) is not listed on the card and can only be determined via the Provider Healthcare Portal.**

Patient Status (<19 years old)	Eligible for Public Vaccine	IIS Eligibility Category Selection	IIS Eligibility Code & Description	IIS Funding Source and Description	Billing
Medicaid • Child is less than 19 years old • Enrolled in Traditional Medicaid • Enrolled in Hoosier CareConnect (Full Medicaid of Package A) • Enrolled in Hoosier Healthwise Package A • Package A is not listed on the card and can only be determined via the Provider Healthcare Portal.	Yes Federal (VFC) vaccine eligible	Medicaid	V02 VFC eligible – Medicaid	VXC1- Publicly funded vaccine stock	• Cannot bill for the cost of the vaccine • Can bill administration fee up to $20.32 per vaccine dose • May issue only a single bill within 90 days • Cannot send to collections for unpaid administration fee
Private Insurance • Child is less than 19 years old • Enrolled in private insurance plan	No	Ineligible for VFC/ Private Insurance	V01 Ineligible for VFC/ Private Insurance	PHC70	• Bill according to plan guidelines

Other considerations for patients that are under 19 years old:

Child's Insurance Status	VFC Eligible?	VFC Eligibility Category
Has private health insurance plan with Medicaid as secondary insurance	Yes	Medicaid
Has health insurance covering all vaccines, but has not yet met plan's deductible or paid for other services received at visit AND has Medicaid as secondary insurance	Yes	Medicaid
Has private health insurance that covers all vaccinations and is American Indian/ Alaskan Native (AI/AN)	Yes	AI/AN. However, provider should choose the eligibility category most cost-effective for the child and family.
Has Medicaid and is an American Indian/ Alaskan Native (AI/AN)	Yes	Medicaid or AI/AN. Provider should use Medicaid for the administration fee because this provides the least out-of-pocket expense for the family
Has insurance plan that does not cover all ACIP recommended vaccines	Yes	Underinsured. Child can only receive vaccines not covered by insurance plan.
Has health insurance covering all vaccines, but has not yet the plan's deductible or paid for other services received at visit	No	Insured. This applies even when the primary insurer would deny reimbursement for the cost of the vaccine and its administration because the plan's deductible has not been met.
Has health insurance covering all vaccines, but the plan has a fixed dollar limit or cap on amount it will cover	Depends	NO - Insured until the fixed dollar limit is met YES - Underinsured after the fixed dollar limit is reached

Facility Name:
Pin #:

VACCINE BORROWING REPORT

VFC-enrolled providers are expected to manage and maintain an adequate inventory of vaccine for both their VFC and non-VFC-eligible patients. **Planned borrowing of VFC vaccine including the use of VFC vaccine as a replacement system for a provider's privately purchased vaccine inventory is not permissible.**

VFC-enrolled providers must ensure borrowing VFC vaccine will not prevent a VFC-eligible child from receiving a needed vaccination.

COMPLETE THIS FORM WHEN:

- A dose of VFC vaccine is administered to a child **NOT** eligible for VFC
- A dose of privately-purchased vaccine is administered to a VFC-eligible child

HOW TO COMPLETE THIS FORM:

- Enter information on each dose of vaccine borrowed in a separate row in the Vaccine Borrowing Report Table.
- All columns must be completed for each dose borrowed.
- The provider must sign and date at the bottom of this report.
- Enter the corresponding reason code in column F of the Borrowing Report Table on page 2.
- Enter details of reason in Column F if an Other code (7Other or 13Other) is entered in the Vaccine Borrowing Report Table.
- Do not forget to record the lot number of the vaccine borrowed and the vaccine returned, and to update your inventory in CHIRP.

Reason for Vaccine Borrowing and Replacement Coding Legend

Reason for Borrowing VFC Dose	Code		Reason for Borrowing Private Dose	Code
Private vaccine shipment delay (vaccine order placed on time/delay in shipping)	1		VFC vaccine shipment delay (order placed on time/delay in shipping)	8
Private vaccine not useable on arrival (vials broken, temperature monitor out of range)	2		VFC vaccine not useable on arrival (vials broken, temperature monitor out of range)	9
Ran out of private vaccine between orders (not due to shipping delays)	3		Ran out of VFC vaccine between orders (not due to shipping delays)	10
Short-dated **private** dose was used for **VFC eligible child**	4		Short-dated **VFC** dose was used for **child not eligible for VFC program**	11
Accidental use of Private dose for VFC eligible child	5		Accidental use of a VFC dose for a child not eligible for the VFC program	12
Replacement of Private dose with VFC when insurance plan did not cover vaccine	6		Other – Describe:	13Other
Other – Describe:	7Other			

WHAT TO DO WITH THIS FORM:

- Providers must submit their borrowing form to the Immunization Division by fax monthly: **317-233-3719**. Completed forms must be retained as a VFC program record and made available to the State/Local or Territorial Immunization Program upon request.

Pin #:

Date Range of Vaccine Reporting (date of first dose borrowed to date of last dose borrowed): ____/____/____ **to**____/____/____

VACCINE BORROWING REPORT TABLE						
A **Vaccine Type Borrowed**	**B** **Stock Used** (VFC or Private)	**C** **Patient Name**	**D** **Patient DOB** (XX/XX/XXXX)	**E** **Date Dose Administered** (XX/XX/XXXX) **AND** **Lot#**	**F** **Reason Appropriate Vaccine Stock was not Used** (Use legend code on page 1 to mark one reason for each dose borrowed)	**G** **Date Dose Returned to Appropriate Stock** (XX/XX/XXXX) **AND** **Lot #**

I hereby certify, subject to penalty under the False Claims Act (31 U.S.C. § 3730) and other applicable Federal and state law, that VFC vaccine dose borrowing and replacement reported on this form has been accurately reported and conducted in conformance with VFC provisions for such borrowing and further certify that all VFC doses borrowed during the noted time period have been fully reported on this form.

Provider Name:	**Provider Signature:**	**Date:**

Vaccine Special Order Request Form

INSTRUCTIONS: Please select indication for use of vaccine and number of doses requested. Upon approval, doses will be shipped directly to your facility. Fax form to: 317-233-3719. **A minimum of 1 dose can be ordered for each vaccine at any time during the month, regardless of a previous order.**

Facility Name: _____ Facility PIN: _____

Name Person Requesting: _____ Date: _____

Telephone Number: _____ Email: _____

Diphtheria-Tetanus (DT – Generic)

	☐ Encephalopathy within seven days of previous dose of DTaP or DTP ☐ Allergy to pertussis component of vaccine ☐ Temp > 105° F, Persistent inconsolable crying lasting 3 or more hours, or collapse within 48 hours of previous dose of DTaP ☐ Seizure within 3 days of receipt previous dose of DTaP vaccine* ☐ Progressive or unstable neurologic disorder, uncontrolled seizures or progressive encephalopathy (only until treatment initiated and condition is stabilized) *A family history of seizures or adverse event following vaccination with DTaP is not a contraindication to vaccination with DTaP.
	Number of doses requested _____
Notes:	

Pneumococcal Polysaccharide Vaccine (PPSV23) - Pneumovax

Chronic Condition	**Asplenia**	**Immunodeficiency**
☐ Chronic heart disease ☐ Chronic lung disease* ☐ Chronic renal disease ☐ Diabetes mellitus ☐ Cerebrospinal fluid leak ☐ Cochlear implant ☐ Other _____ *Children with asthma only if using long-term oral corticosteroid therapy (does not include inhalers)	☐ Sickle cell disease ☐ Asplenia	☐ Congenital or acquired immunodeficiency ☐ HIV ☐ Nephrotic syndrome ☐ Cancer / Leukemia ☐ Treatment with immunosuppressive drugs ☐ Solid organ transplant ☐ Other _____
Number of doses requested _____		
Notes:		

Children with immunocompromising conditions or functional/anatomic asplenia should receive a second dose of PPSV23 5 years following the first dose. For more information on the current ACIP recommendations for the use of PPSV23 in children, please visit: http://www.cdc.gov/vaccines/pubs/ACIP-list.htm

Vaccine Special Order Request Form

INSTRUCTIONS: Please select indication for use of vaccine and number of doses requested. Upon approval, doses will be shipped directly to your facility. Fax form to: 317-233-3719. **A minimum of 1 dose can be ordered for each vaccine at any time during the month, regardless of a previous order.**

Facility Name: _____ Facility PIN: _____

Name Person Requesting: _____ Date: _____

Telephone Number: _____ Email: _____

In addition to these three vaccines listed, Td vaccine should be ordered in limited quantities, **preferably in a minimum of 1-2 doses.** Providers can order this through the Vaccine Order catalog in VTrckS. A Vaccine Special Order Request Form does not need to be completed for this vaccine unless a previous order has already been submitted for the month.

Td (Tetanus and Diphtheria toxoids) – Tenivac

A single dose of Tdap should be given to children 7 through 18 years of age who: 1. Have received tetanus and diphtheria containing vaccines (DT or Td) instead of DTP/DTaP for some or all doses of the childhood series; 2. Have received fewer than 5 doses of DTP/DTaP or 4 doses if the fourth dose was administered at age 4 years or older; or	A 3-dose series of Tdap and Td* should be given to children 7 through 18 years of age who: 1. Have never been vaccinated against tetanus, diphtheria, or pertussis (no doses of pediatric DTP/DTaP/DT or Td). * The preferred catch-up vaccination schedule is a single Tdap dose, followed by Td for any remaining doses. If not administered as the first dose, Tdap can be substituted for any of the other Td doses in the series. Tdap is preferred over Td for the first dose in the catch-up series. Routine Td Schedule for Unvaccinated Persons 7 Years of Age or Older Primary 1 Dose (Tdap) Primary 2 Dose (Td) – minimum 4 week interval Primary 3 Dose (Td) – minimum 6 month interval
Number of doses requested _____	
Notes:	

More information about the catch-up is available in Appendix D at:
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5503a1.htm?s_cid=rr5503a1_e

Vaccine Special Order Request Form

INSTRUCTIONS: Please select indication for use of vaccine and number of doses requested. Upon approval, doses will be shipped directly to your facility. Fax form to: 317-233-3719. **A minimum of 1 dose can be ordered for each vaccine at any time during the month, regardless of a previous order.**

Facility Name: _____ Facility PIN: _____

Name Person Requesting: _____ Date: _____

Telephone Number: _____ Email: _____

Meningococcal Group B – Trumenba	**Meningococcal Group B – Bexsero**
□ Sickle cell disease □ Asplenia □ Complement deficiency □ Microbiologist* □ High-risk Outbreak Exposure *Routinely exposed to isolates of Neisseria meningitidis	□ Sickle cell disease □ Asplenia □ Complement deficiency □ Microbiologist* □ High-risk Outbreak Exposure *Routinely exposed to isolates of Neisseria meningitidis
Number of doses requested _____	**Number of doses requested _____**
Notes:	

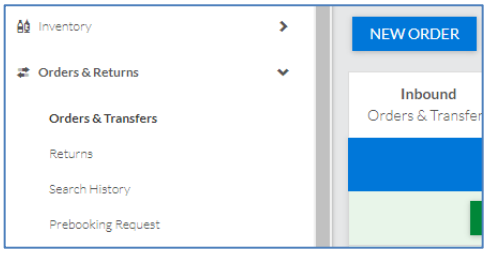
VOMS
(v.2.26.0)

Creating an Order

Users with the **Allow Online Orders** permission can create, edit, save, and submit vaccine orders. Depending on the state's configuration settings, users may be required to correct lot decrementing, and/or reconcile inventory before creating a new order. If the **Allow Only One Brand Selection per Vaccine** option is selected, providers are restricted from selecting multiple brands for the same vaccine in an order set. This allows for improved documentation accuracy.

Create a New Order

1. Click the **Orders & Returns > Orders & Transfers** link in the navigation menu, then click the **New Order** button on the **Orders and Transfers** page.



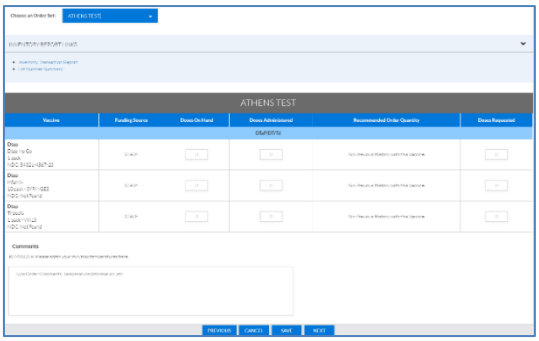
2. On the **Create New Order** page, the required workflow steps are displayed at the top of the page. The current step pulsates in blue to help identify the user's progress in the order process.

   a. *Example*: If the user is required to correct lot decrementing or reconcile inventory before creating a new order, **Correct Lot Decrementing** or **Reconcile Inventory** may appear as the first step in the workflow.
   b. Refer to the *Correct Lot Decrementing* Quick Reference Guide or the *Inventory Reconciliation* Quick Reference Guide for further details.

Choose an Order Set

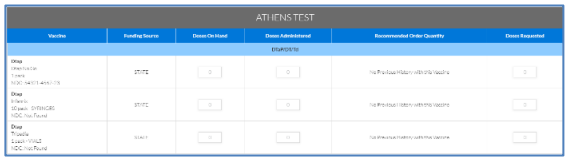
1. Next, select an **Order Set** from the drop-down list. (If there is only one order set, the order set will automatically populate.)

2. The following columns/links appear after an **Order Set** is selected:



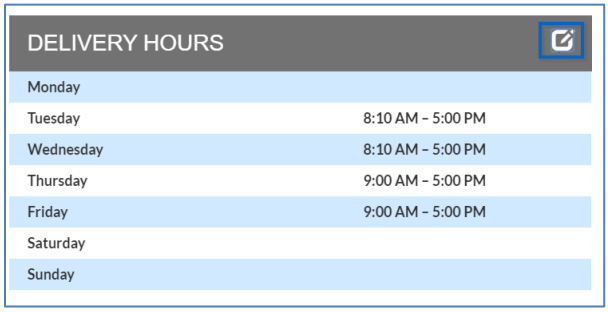
- **Inventory Report Links -** This includes the **Inventory Transaction** and **Lot Number Summary** Report. Select the report to go to the parameters page. Enter report criteria and click **Create Report** to generate the report.
- **Vaccine** – Vaccine name, brand name, packaging information, and NDC number
- **Funding Source** – Vaccine funding source, such as PUB (Public) or PRVT (Private)
- **Doses on Hand** – Current number of available doses
- **Doses Administered** – Number of doses that have been administered
- **Doses Requested** – Number of doses requested for the order. **Note**: this amount must be equal to or above the minimum order quantity
- **Comments** – Enter any order notes and/or temperature information

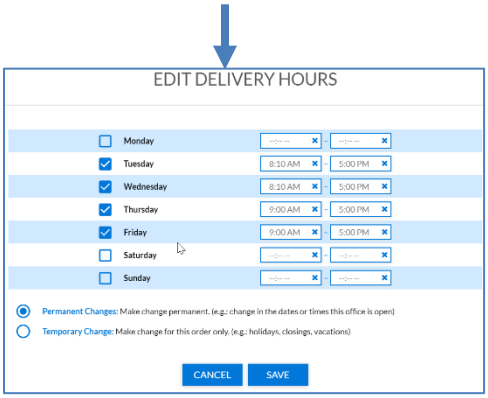
3. In the **Doses Requested** field, enter the quantity of doses requested for the vaccines available in the **Order Set**.



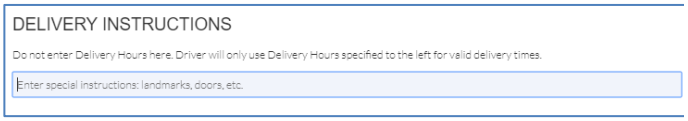
4. When finished entering the information, click **Next** to move on to the next ordering step.
    a. If you are not ready to submit the order at this time, click **Save** to save the order and return to the **Order and Transfers** page where the saved order will be listed.

5. Next, you will be brought to the **Shipping info** page. To edit the delivery hours, click the Edit icon ( ) in the **Delivery Hours** heading. Click **Save** when finished.



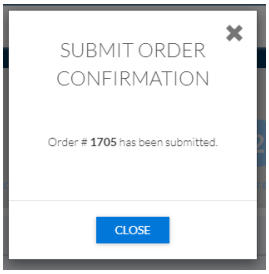


6. If there are any special delivery instructions, enter them in the **Delivery Instructions** textbox.



7. Click **Submit Order**.

8. A confirmation pop-up will appear with the **Order Number**. Select **Close**.



9. The **Orders and Transfers** page reopens with the new order added to the **Inbound Orders & Transfers** list.

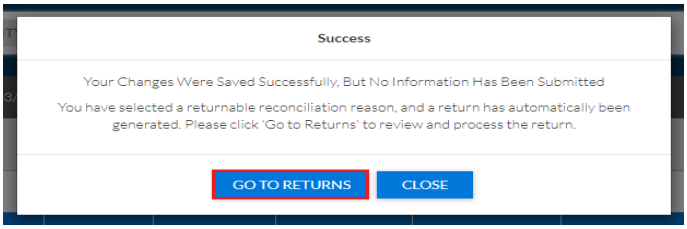
Submit a Return

This guide gives instructions to providers on how to submit a vaccine return in VOMS for vaccines that need to be sent back to McKesson.

Submit a Return

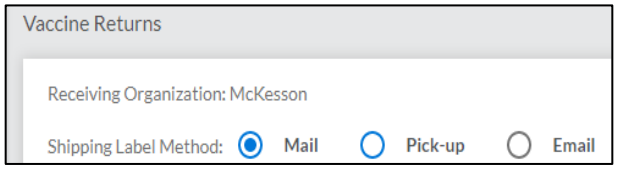
1. A vaccine is automatically created for a return when a user selects a returnable adjustment reason when reconciling their inventory.
    a. Adjustments include Vaccine Recall, Expired, or Spoiled vaccines.

2. Once you have saved or submitted your reconciliation report, a pop-up box will appear notifying you that a return has been generated for those doses. Select **Go to Returns**.



3. If you do not want to go to returns at the time, select **Close**. To go to the Returns page later, select the **Order & Returns** menu heading (1). Then select **Returns** (2).

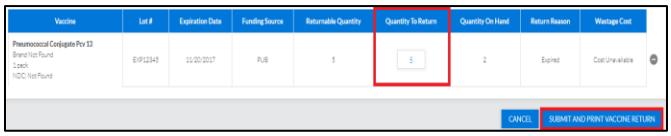
4. On the Vaccine Returns page select a **Shipping Label Method**.



5. Below the Shipping Label Method, all the vaccines that had been reconciled due to a returnable reason will be listed.

6. Enter in the number of vaccines in the **Quantity to Return** field for all the vaccines that you would like to return. You cannot enter in a quantity less than 1.

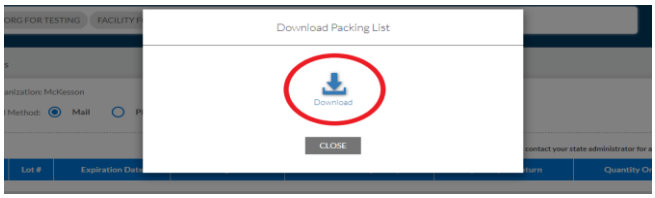
7. Select **Submit and Print Vaccine Return.**



8. The **Vaccine Return Submission** pop-up box will appear. **Select** the number of boxes that are required for this vaccine return.

9. Select **Confirm and Print**.

10. Select the **Download** icon in the center of the pop-up box to print the vaccine return packing slip.



VOMS Individual User Access Form

INSTRUCTIONS:

1. Each user within your facility must complete this form individually.

2. Return via fax to 317-972-8964 or mail to vaccine@isdh.in.gov

Part A – To be completed by Primary and Backup coordinators

Full Name (First and Last):

Job Title: ☐ **Primary VFC Coordinator** ☐ **Back-up Coordinator** ☐ **Other:**_____

Replacing (please provide full name): _____

VFC PIN Number (must be included):

E-mail Address (must be included):

Medical Director's Name:

Facility Phone Number :

Part B - Check the appropriate box

☐	**New CHIRP User**	▪ User is new to CHIRP ▪ This is user's first request for VOMS access
☐	**Existing CHIRP User**	▪ User has been assigned a CHIRP log in and password ▪ User access needs to be updated to include access to VOMS ▪ **CHIRP user name**_____
☐	**Removal of VOMS Access**	▪ Access needs to be deactivated ▪ User no longer requires VOMS access
☐	**Name Change / E-mail Address Change ONLY**	▪ User needs to change name and/or e-mail address ▪ User does NOT need to change CHIRP access permissions ▪ **Complete Part C**
☐	**Facility Change ONLY**	▪ User needs to change access from one facility to another ▪ **Complete New CHIRP user agreement form** ▪ ***Change of facilities, requires a new CHIRP user agreement form***

Part C - Name change and/or e-mail address changes ONLY
(This section is for an existing VOMS user)

Current Name:

New Name:

Current E-mail Address:

New E-mail Address:

Part D – Signatures Required

User (Printed)	User (Signature)	Date Submitted
Medical Director Name (Printed)	Medical Director (Signature)	Date Approved

Warning: You are requesting access to a secure module within the state registry and improper use of this system may result in disciplinary action, as well as civil and criminal penalties. By using this information system, you understand and consent that you shall maintain reasonable and appropriate administrative, technical, and physical safeguards to ensure the integrity and confidentiality of health information. Registry staff may conduct periodic assessments on privacy and security policies. Your facility is held responsible for all publicly funded vaccines ordered through the VOMS system.

Internal Use Only :

CHIRP Helpdesk (Printed)	CHIRP Helpdesk (Signature)	Date Completed

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN®

Documenting Parental Refusal to Have Their Children Vaccinated

345 Park Blvd
Itasca, IL 60143
Phone: 630/626-6000
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E-mail: kidsdocs@aap.org
www.aap.org

All parents and patients should be informed about the risks and benefits of preventive and therapeutic procedures, including vaccination. In the case of vaccination, the American Academy of Pediatrics (AAP) strongly recommends and federal law mandates that this discussion include the provision of the Vaccine Information Statements (VISs). Despite our best efforts to educate parents about the effectiveness of vaccines and the realistic chances of vaccine-associated adverse events, some will decline to have their children vaccinated. This often results from families misinterpreting or misunderstanding information presented by the media and on unmonitored and biased Web sites, causing substantial and often unrealistic fears.

Within a 12-month period, 74% of pediatricians report encountering a parent who refused or delayed one or more vaccines. A 2011 survey of children six months to six years of age reported that 13% of parents followed an alternative vaccination schedule. Of these, 53% refused certain vaccines and 55% delayed some vaccines until the child was older. Seventeen percent reported refusing all vaccines. In a 2009 survey, 11.5% of parents of children 17 years and younger reported refusing at least one vaccine. The use of this or a similar form in concert with direct and non-condescending discussion can demonstrate the importance you place on appropriate immunizations, focuses parents' attention on the unnecessary risk for which they are accepting responsibility, and may in some instances induce a wavering parent to accept your recommendations.

Providing parents (or guardians) with an opportunity to ask questions about their concerns regarding recommended childhood immunizations, attempting to understand parents' reasons for refusing one or more vaccines, and maintaining a supportive relationship with the family are all part of a good risk management strategy. The AAP encourages documentation of the health care provider's discussion with parents about the serious risks of what could happen to an unimmunized or under-immunized child. Provide parents with the appropriate VIS for each vaccine at each immunization visit and answer their questions. For parents who refuse one or more recommended immunizations, document your conversation and the provision of the VIS(s), have a parent sign the Refusal to Vaccinate form, and keep the form in the patient's medical record. The AAP also recommends that you revisit the immunization discussion at each subsequent appointment and carefully document the discussion, including the benefits to each immunization and the risk of not being age-appropriately immunized. For unimmunized or partially immunized children, some physicians may want to flag the chart to be reminded to revisit the immunization discussion, as well as to alert the provider about missed immunizations when considering the evaluation of future illness, especially young children with fevers of unknown origin.

This form may be used as a template to document that the health care provider had a discussion with the parent signing the form about the risks of failing to immunize the child. It is not intended as a substitute for legal advice from a qualified attorney as differing state laws and factual circumstances will impact the outcome. While it may be modified to reflect the particular circumstances of a patient, family, or medical practice, practices may want to consider obtaining advice from a qualified attorney. If a parent refuses to sign the refusal form such refusal along with the name of a witness to the refusal should be documented in the medical record.

The AAP Section on Infectious Diseases and other contributing sections and committees hope this form will be helpful to you as you deal with parents who refuse immunizations. It is available on the AAP Web site onthe Section on Infectious Diseases Web site (http://www2.aap.org/sections/infectdis/resources.cfm), and the Web site for the AAP Childhood Immunization Support Program (http://www2.aap.org/immunization/pediatricians/refusaltovaccinate.html).

Sincerely,

/s/
Tina Tan, MD, FAAP
Chairperson
AAP Section on Infectious Diseases

/s/
Ed Rothstein, MD, FAAP
AAP Section on Infectious Diseases

Refusal to Vaccinate

Child's Name _____ Child's ID# _____

Parent's/Guardian's Name _____

My child's doctor/nurse, _____, has advised me that my child (named above) should receive the following vaccines:

Recommended	Declined
☐ Hepatitis B vaccine	☐
☐ Diphtheria, tetanus, acellular pertussis (DTaP or Tdap) vaccine	☐
☐ Diphtheria tetanus (DT or Td) vaccine	☐
☐ *Haemophilus influenzae* type b (Hib) vaccine	☐
☐ Pneumococcal conjugate or polysaccharide vaccine	☐
☐ Inactivated poliovirus (IPV) vaccine	☐
☐ Measles-mumps-rubella (MMR) vaccine	☐
☐ Varicella (chickenpox) vaccine	☐
☐ Influenza (flu) vaccine	☐
☐ Meningococcal conjugate or polysaccharide vaccine	☐
☐ Hepatitis A vaccine	☐
☐ Rotavirus vaccine	☐
☐ Human papillomavirus (HPV) vaccine	☐
☐ Other _____	☐

I have been provided with and given the opportunity to read each Vaccine Information Statement from the Centers for Disease Control and Prevention explaining the vaccine(s) and the disease(s) it prevents for each of the vaccine(s) checked as recommended and which I have declined, as indicated above. I have had the opportunity to discuss the recommendation and my refusal with my child's doctor or nurse, who has answered all of my questions about the recommended vaccine(s). A list of reasons for vaccinating, possible health consequences of non-vaccination, and possible side effects of each vaccine is available at www.cdc.gov/vaccines/pubs/vis/default.htm. I understand the following:

- The purpose of and the need for the recommended vaccine(s).
- The risks and benefits of the recommended vaccine(s).
- That some vaccine-preventable diseases are common in other countries and that my unvaccinated child could easily get one of these diseases while traveling or from a traveler.
- If my child does not receive the vaccine(s) according to the medically accepted schedule, the consequences may include
  - Contracting the illness the vaccine is designed to prevent (the outcomes of these illnesses may include one or more of the following: certain types of cancer, pneumonia, illness requiring hospitalization, death, brain damage, paralysis, meningitis, seizures, and deafness; other severe and permanent effects from these vaccine-preventable diseases are possible as well).
  - Transmitting the disease to others (including those too young to be vaccinated or those with immune problems), possibly requiring my child to stay out of child care or school and requiring someone to miss work to stay home with my child during disease outbreaks.
- My child's doctor and the American Academy of Pediatrics, the American Academy of Family Physicians, and the Centers for Disease Control and Prevention all strongly recommend that the vaccine(s) be given according to recommendations.

Nevertheless, I have decided at this time to decline or defer the vaccine(s) recommended for my child, as indicated above, by checking the appropriate box under the column titled "Declined." I know that failure to follow the recommendations about vaccination may endanger the health or life of my child and others with whom my child might come into contact. I therefore agree to tell all health care professionals in all settings what vaccines my child has not received because he or she may need to be isolated or may require immediate medical evaluation and tests that might not be necessary if my child had been vaccinated.

I know that I may readdress this issue with my child's doctor or nurse at any time and that I may change my mind and accept vaccination for my child any time in the future.

I acknowledge that I have read this document in its entirety and fully understand it.

Parent/Guardian Signature: _____ Date: _____

Witness: _____ Date: _____

I have had the opportunity to rediscuss my decision not to vaccinate my child and still decline the recommended immunizations.

Parent's Initials: _____ Date: _____ Parent's Initials: _____ Date: _____

American Academy of Pediatrics

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9-80/1018

Parental Refusal to Accept Vaccination: Resources for Pediatricians

The following are some of the resources available to help pediatricians develop a productive dialogue with vaccine-hesitant parents and answer questions about vaccine risks and benefits:

Web Sites

1. **AAP Childhood Immunization Support Program (CISP)**
   Information for providers and parents.
   www.aap.org/immunization
   www2.aap.org/immunization/pediatricians/refusaltovaccinate.html
2. **Immunization Action Coalition (IAC)**
   The IAC works to increase immunization rates by creating and distributing educational materials for health professionals and the public that enhance the delivery of safe and effective immunization services. The IAC "Unprotected People Reports" are case reports, personal testimonies, and newspaper and journal articles about people who have suffered or died from vaccine-preventable diseases.
   www.immunize.org/reports
3. **Centers for Disease Control and Prevention (CDC) National Immunization Program**
   Information about vaccine safety.
   www.cdc.gov/vaccines/hcp.htm
4. **National Network for Immunization Information (NNii)**
   Includes information to help answer patients' questions and provide the facts about immunizations.
   http://www.immunizationinfo.org/professionals
5. **Vaccine Education Center at Children's Hospital of Philadelphia**
   Information for parents includes "Vaccine Safety FAQs" and "A Look at Each Vaccine."
   www.vaccine.chop.edu
6. **Institute for Vaccine Safety, Johns Hopkins Bloomberg School of Public Health**
   Provides an independent assessment of vaccines and vaccine safety to help guide decision-makers and educate physicians, the public, and the media about key issues surrounding the safety of vaccines.
   www.vaccinesafety.edu
7. **Immunize Canada**
   Immunize Canada aims to meet the goal of eliminating vaccine-preventable disease through education, promotion, advocacy, and media relations. It includes resources for parents and providers.
   www.immunize.cpha.ca/en/default.aspx
8. **Sample office policy/letter to parents about refusal to vaccinate**

Journal Articles

1. Offit PA, Jew RK. Addressing parents' concerns: do vaccines contain harmful preservatives, adjuvants, additives, or residuals? *Pediatrics.* 2003;112(6 Pt 1):1394–1397
2. Offit PA, Quarles J, Gerber MA, et al. Addressing parents' concerns: do multiple vaccines overwhelm or weaken the infant's immune system? *Pediatrics.* 2002;109(1):124–129
3. Diekema DS, American Academy of Pediatrics Committee on Bioethics. Responding to parental refusals of immunization of children. *Pediatrics.* 2005;115(5):1428–1431

Books

1. American Academy of Pediatrics. *Red Book: 2012 Report of the Committee on Infectious Diseases.* Pickering LK, Baker CJ, Long SS, Kimberlin DW, eds. 29th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2012
2. Marshall GS. *The Vaccine Handbook: A Practical Guide for Clinicians.* 5th ed. West Islip, NY: Professional Communications, Inc; 2015

Handout

1. Immunization Action Coalition. Reliable sources of immunization information: where to go to find answers! http://www.immunize.org/catg.d/p4012.pdf. Accessed October 17, 2012

Reliable Immunization Resources for Parents

Web Sites

1. **Centers for Disease Control and Prevention (CDC) Vaccine Information Statements**
   Provide possible health consequences of non-vaccination and possible side effects of each vaccine.
   www.cdc.gov/vaccines/pubs/vis/default.htm
2. **AAP Childhood Immunization Support Program (CISP)**
   Information for providers and parents.
   www.aap.org/immunization
3. **Why Immunize?**
   A description of the individual diseases and the benefits expected from vaccination.
   www2.aap.org/immunization/families/faq/whyimmunize.pdf
4. **Pennsylvania Immunization Education Program of Pennsylvania Chapter, AAP**
   Includes answers to common vaccine questions and topics, such as addressing vaccine safety concerns; evaluating anti-vaccine claims; sources of accurate immunization information on the Web; and talking with parents about vaccine safety.
   www.paiep.org
5. **CDC For Parents: Vaccines for Your Children**
   Information about vaccine safety.
   www.cdc.gov/vaccines/parents/index.html
6. **National Network for Immunization Information (NNii)**
   Includes information to help answer patients' questions and provide the facts about immunizations.
   www.immunizationinfo.org/parents
7. **Vaccine Education Center at Children's Hospital of Philadelphia**
   Information for parents includes "Vaccine Safety FAQs" and "A Look at Each Vaccine."
   www.vaccine.chop.edu
8. **Institute for Vaccine Safety, Johns Hopkins Bloomberg School of Public Health**
   Provides an independent assessment of vaccines and vaccine safety to help guide decision-makers and educate physicians, the public, and the media about key issues surrounding the safety of vaccines.
   www.vaccinesafety.edu
9. **Immunize Canada**
   Immunize Canada aims to meet the goal of eliminating vaccine-preventable disease through education, promotion, advocacy, and media relations. It includes resources for parents and providers.
   http://immunize.cpha.ca/en/default.aspx
10. **Vaccinate Your Baby**
    This Every Child By Two site serves as a central resource of vaccine information for parents. The site links to the latest research and studies about vaccines, an interactive timeline on the benefits of vaccines, information about vaccine safety and ingredients, and the importance of adhering to the recommended schedule.
    www.vaccinateyourbaby.org

Books

1. American Academy of Pediatrics. *Immunizations and Infectious Diseases: An Informed Parent's Guide.* Fisher MC, ed. Elk Grove Village, IL: American Academy of Pediatrics; 2006
2. Myers MG, Pineda D. *Do Vaccines Cause That?! A Guide for Evaluating Vaccine Safety Concerns.* Galveston, TX: Immunizations for Public Health; 2008
3. Offit PA. *Autism's False Prophets: Bad Science, Risky Medicine, and the Search for a Cure.* New York, NY: Columbia University Press; 2008
4. Offit PA. *Deadly Choices: How the Anti-Vaccine Movement Threatens Us All.* New York, NY: Basic Books; 2011
5. Mnookin S. *The Panic Virus: A True Story of Medicine, Science, and Fear.* New York, NY: Simon and Schuster; 2011
6. Offit PA, Moser CA. *Vaccines and Your Child: Separating Fact from Fiction.* New York, NY: Columbia University Press; 2011

 9-80/1018

Diphtheria and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against diphtheria is by getting the diphtheria-tetanus-pertussis shot (also called the DTaP shot). Doctors recommend that all children get the shot.

Why should my child get the DTaP shot?

The DTaP shot:

- Protects your child from diphtheria, a potentially serious disease, as well as tetanus and whooping cough (pertussis).
- Prevents your child from developing a thick coating in the back of the nose or throat from diphtheria that can make it hard to breathe or swallow.
- Keeps your child from missing school or child care (and keeps you from missing work to care for your sick child).

Is the DTaP shot safe?

Yes. The DTaP shot is very safe, and it is effective at preventing diphtheria. Vaccines, like any medicine, can have side effects. Most children who get the DTaP shot have no side effects.

What are the side effects?

Most children don't have any side effects from the shot. The side effects that do occur are usually mild, and may include:

- Redness, swelling, or pain where the shot was given
- Fever
- Vomiting

These types of side effects happen in about 1 out of every 4 children who get the shot.

More serious side effects are very rare but can include:

- A fever over 105 degrees
- Nonstop crying for 3 hours or more
- Seizures (jerking, twitching of the muscles, or staring)

What is diphtheria?

Diphtheria is a serious disease caused by a toxin (poison) made by bacteria. It causes a thick coating in the back of the nose or throat that makes it hard to breathe or swallow. It can be deadly.

Doctors recommend that your child get five doses of the DTaP vaccine for best protection. Your child will need one dose at each of the following ages:

- 2 months
- 4 months
- 6 months
- 15 through 18 months
- 4 through 6 years

CS HCVG15-CHD-106 07/06/2017

What are the symptoms of diphtheria?

Diphtheria starts with a sore throat, mild fever (101 degrees or less), and chills. Next, the diphtheria toxin makes a thick coating in the back of the nose or throat. It may be white or grayish. The coating makes it hard to breathe or swallow.

Is it serious?

The coating in the back of the nose or throat can get so thick that it blocks the airway, so the person can't breathe.

The diphtheria toxin can affect the heart, causing an abnormal heart rhythm and even heart failure. It can also affect the nerves and lead to paralysis (unable to move parts of the body).

About 1 out of 10 people who get diphtheria dies. In children younger than 5 years old, as many as 1 out of 5 children who get diphtheria dies.

How does diphtheria spread?

Diphtheria spreads when an infected person coughs or sneezes. A person who does not receive treatment can spread the disease for about 2 weeks after infection.

A diphtheria booster is needed to keep up protection from diphtheria

The DTaP shot does not offer lifetime protection. People need booster vaccines to keep up protection from diphtheria.

Children should get a booster vaccine called Tdap (which helps to protect against tetanus, diphtheria, and whooping cough) at 11 or 12 years old. Anyone who does not get Tdap at that age should get one dose as a replacement for their 10-year Td booster shot.

Adults need a booster called the Td vaccine (for tetanus and diphtheria) every 10 years.

Where can I learn more about the DTaP shot and my child?

To learn more about the DTaP shot, talk to your child's doctor, call 1-800-CDC-INFO or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

Flu Vaccine for Preteens and Teens

A yearly flu vaccine is the best way to protect your child from flu and its potentially serious complications.

Why should my child get a flu vaccine?

- Reduces the risk of flu illness
- Reduces the risk of hospitalization from flu
- Can be life-saving in children
- May reduce illness severity among people who get vaccinated but still get sick with flu
- Reduces the chances that your child will have to miss school or other activities and you will have to miss work to care for them
- Helps reduce the spread of flu to family and friends, including babies younger than 6 months who are too young to get a flu vaccine, and older people who are more vulnerable to getting very sick from flu
- If your child has certain long-term health problems, they are at higher risk of developing serious flu complications.

When should my child be vaccinated?

Preteens and teens should get a yearly flu vaccine by the end of October. However, getting vaccinated later can still be beneficial. Vaccination should continue to be given throughout the flu season, even into winter or later.

Where can my child get a flu vaccine?

Flu vaccines are available in many places, including doctor's offices or clinics, and sometimes at local health departments, pharmacies, urgent care clinics, grocery stores, and schools. Visit vaccinefinder.org to find a place near you to get a flu vaccine and other recommended vaccines.

Are flu vaccines safe?

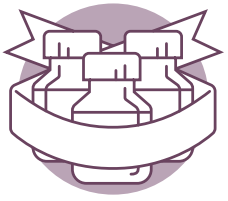
Flu vaccines have a good safety record. Hundreds of millions of Americans have safely received flu vaccines for more than 50 years, and there has been extensive research supporting the safety of flu vaccines.

Like any vaccine or medicine, flu vaccines can have side effects. When they occur, flu vaccine side effects are generally mild and go away on their own within a few days.

Fainting after any vaccine is more common among preteens and teens. To help avoid fainting and injuries related to fainting, preteens and teens should sit or lie down when they get a shot and for about 15 minutes after getting the shot.

How can I get help paying for these vaccines?

Most health insurance plans provide coverage for routine vaccinations. The Vaccines for Children (VFC) program also provides vaccines for children 18 years and younger who are uninsured, underinsured, Medicaid-eligible, American Indian, or Alaska Native. Learn more at www.cdc.gov/Features/VFCprogram.



Talk to your child's doctor or nurse about the flu vaccine or visit **www.cdc.gov/flu/prevent**

Last updated JULY 2019

Hepatitis A and the Vaccine (Shot) to Prevent It

Last updated August 2018

The best way to protect against hepatitis A is by getting the hepatitis A vaccine. Doctors recommend that all children get the vaccine.

Why should my child get the hepatitis A shot?

The hepatitis A shot:

- Protects your child against hepatitis A, a potentially serious disease.
- Protects other people from the disease because children under 6 years old with hepatitis A usually don't have symptoms, but they often pass the disease to others without anyone knowing they were infected.
- Keeps your child from missing school or child care (and keeps you from missing work to care for your sick child).

Is the hepatitis A shot safe?

The hepatitis A vaccine is very safe, and it is effective at preventing the hepatitis A disease. Vaccines, like any medicine, can have side effects. These are usually mild and go away on their own.

What are the side effects?

The most common side effects are usually mild and last 1 or 2 days. They include the following:

- Sore arm from the shot
- Headache
- Tiredness
- Fever
- Loss of appetite (not wanting to eat)

What is hepatitis A?

Hepatitis A is a serious liver disease caused by the hepatitis A virus. Children with the virus often don't have symptoms, but they often pass the disease to others, including their unvaccinated parents or caregivers. These individuals can get very sick.

What are the symptoms of hepatitis A?

Children under 6 years old often have no symptoms.

Older children and adults feel very sick and weak. Symptoms usually appear 2 to 6 weeks after a person gets the virus. The symptoms may include the following:

- Fever
- Loss of appetite (not wanting to eat)
- Tiredness
- Stomach pain
- Vomiting
- Dark urine
- Yellow skin and eyes

Doctors recommend that your child get two doses of the hepatitis A shot for best protection. He or she should get the first dose at 12 through 23 months. He or she will need the second dose 6 months after the last dose.

CS HCVC15-CHD-109 09/10/2018

Is it serious?

Older children, adolescents and adults often feel sick and symptoms can last for up to 6 months. There is no specific treatment for hepatitis A. Some people with hepatitis A get so sick that they need care in the hospital.

How does hepatitis A spread?

Hepatitis A virus is found in the stool (poop) of a person who has the virus. It spreads when a person puts something in his or her mouth that has the hepatitis A virus on it. Even if the item looks clean, it can still have virus on it that can spread to others. The amount of stool can be so tiny that it cannot be seen with the naked eye. You can get it by touching objects such as doorknobs or diapers or eating food that has the virus on it.

Where can I learn more about the hepatitis A vaccine and my child?

To learn more about the hepatitis A vaccine, talk to your child's doctor, call 1-800-CDC-INFO or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

Hepatitis B and the Vaccine (Shot) to Prevent It

Last updated August 2018

The best way to protect against hepatitis B is by getting the hepatitis B vaccine. Doctors recommend that all children get the vaccine.

Why should my child get the hepatitis B shot?

The hepatitis B shot:

- Protects your child against hepatitis B, a potentially serious disease.
- Protects other people from the disease because children with hepatitis B usually don't have symptoms, but they may pass the disease to others without anyone knowing they were infected.
- Prevents your child from developing liver disease and cancer from hepatitis B.
- Keeps your child from missing school or childcare (and keeps you from missing work to care for your sick child).

Is the hepatitis B shot safe?

The hepatitis B vaccine is very safe, and it is effective at preventing hepatitis B. Vaccines, like any medicine, can have side effects. But serious side effects caused by the hepatitis B vaccine are extremely rare.

What are the side effects?

Most people who get the hepatitis B vaccine will have no side effects at all. When side effects do occur, they are often very mild, such as a low fever (less than 101 degrees) or a sore arm from the shot.

What is hepatitis B?

Hepatitis B is a contagious liver disease caused by the hepatitis B virus. When a person is first infected with the virus, he or she can develop an "acute" (short-term) infection. Acute hepatitis B refers to the first 6 months after someone is infected with the hepatitis B virus. This infection can range from a very mild illness with few or no symptoms to a serious condition requiring hospitalization. Some people are able to fight the infection and clear the virus.

For others, the infection remains and is "chronic," or lifelong. Chronic hepatitis B refers to the infection when it remains active instead of getting better after 6 months. Over time, the infection can cause serious health problems, and even liver cancer.

CDC recommends that your child get three doses of the hepatitis B shot for best protection at the following ages:

- Shortly after birth,
- 1 through 2 months, and
- 6 through 18 months

CS HCVCI5-CHD-112 09/14/2018

What are the symptoms of hepatitis B?

Infants and young children usually show no symptoms. But, in about 7 out of 10 older children and adults, recent hepatitis B infection causes the following:

- Loss of appetite (not wanting to eat)
- Fever
- Tiredness
- Pain in muscles, joints, and stomach
- Nausea, diarrhea, and vomiting
- Dark urine
- Yellow skin and eyes

These symptoms usually appear 3 or 4 months after a person gets the virus.

Is it serious?

Hepatitis B can be very serious. Most people with a recent hepatitis B infection may feel sick for a few weeks to several months. Some people get over the illness. For other people, the virus infection remains active in their bodies for the rest of their life.

Although people with lifelong hepatitis B usually don't have symptoms, the virus causes liver damage over time and could lead to liver cancer. There is no cure for hepatitis B, but treatment can help prevent serious problems.

How does hepatitis B spread?

Hepatitis B virus spreads through blood or other body fluids that contain small amounts of blood from an infected person. People can spread the virus even when they have no symptoms.

Babies and children can get hepatitis B in the following ways:

- At birth from their infected mother.
- Being bitten by an infected person.
- By touching open cuts or sores of an infected person.
- Through sharing toothbrushes or other personal items used by an infected person.
- From food that was chewed (for a baby) by an infected person.

The virus can live on objects for 7 days or more. Even if you don't see any blood, there could be virus on an object.

Where can I learn more about the hepatitis B vaccine and my child?

To learn more about the hepatitis B vaccine, talk to your child's doctor, call 1-800-CDC-INFO or visit www.cdc.gov/vaccines/parents.

The Hepatitis B Vaccine Dose at Birth

It's hard to imagine putting your newborn through the pain of a shot. But a little stick early in life is an important first step to protecting your baby against a deadly disease.

All babies should get the first shot of hepatitis B vaccine shortly after birth. This shot acts as a safety net, reducing the risk of getting the disease from moms or family members who may not know they are infected with hepatitis B.

When a mom has hepatitis B, there's an additional medicine that can help protect the baby against hepatitis B, called the hepatitis B immune globulin (HBIG). HBIG gives a baby's body a "boost" or extra help to fight the virus as soon as he is born. This shot works best when the baby gets it within the first 12 hours of his life. The baby will also need to complete the full hepatitis B vaccination series for best protection.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

Hib Disease and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against Hib disease is by getting the Hib vaccine. Doctors recommend that all children get the vaccine.

Why should my child get the Hib shot?

The Hib vaccine:

- Protects your child from Hib disease, which can cause lifelong disability and be deadly.
- Protects your child from the most common type of Hib disease, meningitis (an infection of the tissue covering the brain and spinal cord).
- Keeps your child from missing school or child care (and keeps you from missing work to care for your sick child).

Is the Hib shot safe?

Yes. The Hib vaccine is very safe, and it is effective at preventing Hib disease. Vaccines, like any medicine, can have side effects. Most children don't have any side effects from the vaccine.

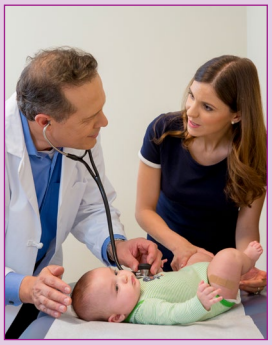
What are the side effects?

When side effects do occur, they are usually mild and last 2 or 3 days. They include:

- Redness, swelling, warmth, or pain where the shot was given
- Fever

Doctors recommend that your child get 4 doses of the Hib vaccine for best protection. Your child will need one dose at each of the following ages:

- 2 months
- 4 months
- 6 months (for some brands)
- 12 through 15 months



What is Hib disease?

Hib disease is a serious illness caused by the bacteria *Haemophilus influenzae* type b (Hib). Babies and children younger than 5 years old are most at risk for Hib disease. It can cause lifelong disability and be deadly.

What are the symptoms of Hib disease?

Hib disease causes different symptoms depending on which part of the body it affects.

The most common type of Hib disease is meningitis. This is an infection of the covering of the brain and spinal cord. It causes the following:

- High fever
- Confusion
- Headache or stiff neck
- Pain from bright lights
- Poor eating and drinking, low alertness, or vomiting (in babies)

Hib disease can also cause the following:

- Throat swelling that makes it hard to breathe
- Joint infection
- Skin infection
- Pneumonia (lung infection)
- Bone infection

Is it serious?

Hib disease is very serious. Most children with Hib disease need care in the hospital. Even with treatment, as many as 1 out of 20 children with Hib meningitis dies. As many as 1 out of 5 children who survive Hib meningitis will have brain damage or become deaf.

DEPARTMENT OF HEALTH & HUMAN SERVICES · USA

CDC CENTERS FOR DISEASE CONTROL AND PREVENTION

AMERICAN ACADEMY OF FAMILY PHYSICIANS
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CS HCVG15-CHD-115 07/06/2017

How does Hib bacteria spread?

Hib bacteria spread when an infected person coughs or sneezes. Usually, the Hib bacteria stay in a person's nose and throat and do not cause illness. But if the bacteria spread into the lungs or blood, the person will get very sick.

Where can I learn more about the Hib shot and my child?

To learn more about the Hib vaccine, talk to your child's doctor, call 1-800-CDC-INFO or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

HPV VACCINE
IS CANCER PREVENTION

HPV Vaccine for Preteens and Teens

HPV vaccination is recommended at ages 11-12 to protect against cancers caused by HPV infection.

Why does my child need HPV vaccine?

Human papillomavirus (HPV) vaccine protects against cancers caused by HPV infection. HPV is a common virus that infects teens and adults. About 14 million people, including teens, become infected with HPV each year. HPV infection can cause cervical, vaginal, and vulvar cancers in women and penile cancer in men. HPV can also cause anal cancer, cancer of the back of the throat (oropharynx), and genital warts in both men and women.

When should my child be vaccinated?

All kids who are 11 or 12 years old should get two shots of HPV vaccine six to twelve months apart. Getting vaccinated on time protects preteens long before ever being exposed to the virus. People get HPV from another person during intimate sexual contact.

Some children may need three doses of HPV vaccine. For example, adolescents who receive their two shots less than five months apart will need a third dose for best protection. Also, children who start the vaccine series on or after their 15th birthday need three shots given over 6 months. If your teen hasn't gotten the vaccine yet, talk to his/her doctor about getting it as soon as possible.

The best way to remember to get your child all of the recommended doses is to make an appointment for the remaining shots before you leave the doctor's office or clinic.

Is HPV vaccine safe for my child?

HPV vaccination provides safe, effective, and long-lasting protection against cancers caused by HPV. HPV vaccine has a reassuring safety record that's backed by 10 years of monitoring and research.

Like any vaccine or medicine, HPV vaccination can cause side effects. The most common side effects are mild and include pain, redness, or swelling in the arm where the shot was given; dizziness, fainting, nausea, and headache. Fainting after any vaccine, including HPV vaccine, is more common among adolescents.

To prevent fainting and injuries related to fainting, adolescents should be seated or lying down during vaccination and remain in that position for 15 minutes after the vaccine is given. The benefits of HPV vaccination far outweigh any potential risk of side effects.

It is important to tell the doctor or nurse if your child has any severe allergies, including an allergy to latex or yeast. HPV vaccine is not recommended for anyone who is pregnant.

How can I get help paying for these vaccines?

The Vaccines for Children (VFC) program provides vaccines for children ages 18 years and younger, who are uninsured, Medicaid-eligible, American Indian or Alaska Native. Learn more at www.cdc.gov/Features/VFCprogram

Where can I learn more?

Talk to your child's doctor or nurse to learn more about HPV vaccine and the other vaccines that your child may need. You can also find out more about HPV vaccine at

www.cdc.gov/hpv

Last updated JUNE 2018

Measles and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against measles is to get the measles-mumps-rubella shot (called the MMR shot). Doctors recommend that all children get the MMR shot.

Why should my child get the MMR shot?

The MMR shot:

- Protects your child from measles, a potentially serious disease, as well as mumps and rubella.
- Prevents your child from getting an uncomfortable rash and high fever from measles.
- Keeps your child from missing school or childcare (and keeps you from missing work to care for your sick child).

Is the MMR shot safe?

Yes. The MMR shot is very safe, and it is effective at preventing measles (as well as mumps and rubella). Vaccines, like any medicine, can have side effects. But most children who get the MMR shot have no side effects.

What are the side effects?

Most children do not have any side effects from the shot. The side effects that do occur are usually very mild, such as a fever, rash, soreness or swelling where the shot was given, or temporary pain and stiffness in the joints (mostly in teens and adults). More serious side effects are rare. These may include high fever that could cause a seizure.

Is there a link between the MMR shot and autism?

No. Scientists in the United States and other countries have carefully studied the MMR shot. None has found a link between autism and the MMR shot.

What is measles?

Measles is a serious respiratory disease (in the lungs and breathing tubes) that causes a rash and fever. It is very contagious. In rare cases, it can be deadly.

What are the symptoms of measles?

Measles starts with a fever that can get very high. Some of the other symptoms that may occur are:

- Cough, runny nose, and red eyes
- Rash of tiny, red spots that start at the head and spread to the rest of the body
- Diarrhea
- Ear infection

Doctors recommend that your child get 2 doses of the MMR shot for best protection. Your child will need one dose at each of the following ages:

- 12 through 15 months
- 4 through 6 years

Infants 6 months to 11 months old should have 1 dose of MMR shot before traveling to another country.

CS HCVG15-CHD-122 05/30/2017

Is it serious?

Measles can be dangerous, especially for babies and young children. From 2001-2013, 28% of children younger than 5 years old who had measles had to be treated in the hospital.

For some children, measles can lead to:

- Pneumonia (a serious lung infection)
- Lifelong brain damage
- Deafness
- Death

How does measles spread?

Measles spreads when a person infected with the measles virus breathes, coughs, or sneezes. It is very contagious. You can catch measles just by being in a room where a person with measles has been, up to 2 hours after that person is gone. And you can catch measles from an infected person even before they have a measles rash. Almost everyone who has not had the MMR shot will get measles if they are exposed to the measles virus.

Where do measles cases in the United States come from?

Every year, unvaccinated U.S. residents get measles while they are abroad and bring the disease into the United States and spread it to others. Measles is common in other parts of the world, including countries in Europe, Asia, the Pacific Islands, and Africa. Worldwide, about 20 million people get measles each year. When people with measles travel into the United States, they can spread the disease to unvaccinated people including children too young to be vaccinated.

How many measles cases are there in the United States each year?

From year to year, measles cases can range from roughly less than 100 to a couple hundred. However, in some years like 2014, there were more measles cases than usual. In 2014, 667 people from 27 states were reported as having measles. Most of these people got measles in the United States after being exposed to someone who got measles while in another country.

Where can I learn more about the MMR shot and my child?

To learn more about the MMR shot, talk to your child's doctor, call 1-800-CDC-INFO, or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend children receive all vaccines according to the recommended schedule.

Meningococcal Vaccines for Preteens and Teens

All preteens and teens should get vaccines to protect against meningococcal disease. Talk with your child's doctor or nurse about meningococcal vaccination to help protect your child's health.

Why does my child need meningococcal vaccines?

Meningococcal vaccines help protect against the bacteria that cause meningococcal disease. Meningococcal disease can refer to any illness caused by a type of bacteria called *Neisseria meningitidis*. Meningococcal disease is not very common in the United States, but teens and young adults are at increased risk.

The two most common types of illnesses include infections of the

- **Lining of the brain and spinal cord (meningitis)**
- **Bloodstream**

Even with treatment, about 10 to 15 out of 100 people with meningococcal disease will die from it. Meningococcal vaccines are the best way to protect preteens and teens from getting meningococcal disease.

When should my child be vaccinated?

Dose 1: *Ages 11-12*
Dose 2: *Age 16*

All preteens and teens should get 2 doses of the meningococcal conjugate (MenACWY) vaccine. They should get the first dose at ages 11-12 and a booster dose at 16 years old. If your teen hasn't gotten this meningococcal shot, talk to their doctor or nurse about getting it as soon as possible.

Teens and young adults (16 through 23 years old) may also get a serogroup B meningococcal (MenB) vaccine (2 doses). The preferred age to get MenB vaccine is 16 through 18 years old. Talk with your teen's doctor or nurse about meningococcal vaccination to help protect your child's health.

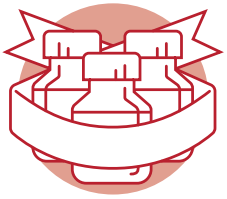
Are meningococcal vaccines safe for my child?

Researchers have studied the meningococcal vaccines very carefully and they are shown to be very safe. Like any vaccine, meningococcal vaccines may cause mild side effects, like redness and soreness where the shot was given (usually in the arm). Note that your child can get both meningococcal vaccines during the same visit, but in different arms.

Some preteens and teens might faint after getting a meningococcal vaccine or any shot. To help avoid fainting and injuries related to fainting, preteens and teens should sit or lie down when they get a shot and then for about 15 minutes after getting the shot. Serious side effects from meningococcal vaccines are rare.

How can I get help paying for these vaccines?

Most health insurance plans cover routine vaccinations. The Vaccines for Children (VFC) program also provides vaccines for children 18 years and younger who are uninsured, underinsured, Medicaid-eligible, American Indian, or Alaska Native. Learn more at www.cdc.gov/Features/VFCprogram.



Talk to your child's doctor or nurse about meningococcal vaccines, or visit **www.cdc.gov/meningococcal/vaccine-info.html**

Last updated JULY 2019

Mumps and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against mumps is to get the measles-mumps-rubella shot (called the MMR shot). Doctors recommend that all children get the MMR shot.

Why should my child get the MMR shot?

The MMR shot:

- Protects your child from mumps, a potentially serious disease, as well as measles and rubella.
- Prevents your child from getting a fever and swollen glands under the ears or jaw from mumps.
- Keeps your child from missing school or childcare (and keeps you from missing work to care for your sick child).

Is the MMR shot safe?

Yes. The MMR shot is very safe and effective at preventing mumps (as well as measles and rubella). Vaccines, like any medicine, can have side effects. But most children who get the MMR shot have no side effects.

What are the side effects?

Most children do not have any side effects from the shot. The side effects that do occur are usually very mild, such as a fever, rash, soreness or swelling where the shot was given, or temporary pain and stiffness in the joints (mostly in teens and adults). More serious side effects are rare. These may include high fever that could cause a seizure.

Is there a link between the MMR shot and autism?

No. Scientists in the United States and other countries have carefully studied the MMR shot. None has found a link between autism and the MMR shot.

What is mumps?

Mumps is a contagious disease caused by a virus. It spreads easily through coughing and sneezing. There is no treatment for mumps, and it can cause long-term health problems.

What are the symptoms of mumps?

Mumps usually causes the following symptoms for about 7 to 10 days:

- Fever
- Headache
- Muscle aches
- Tiredness
- Loss of appetite (not wanting to eat)
- Swollen glands under the ears or jaw

Some people who get mumps do not have symptoms. Others may feel sick but will not have swollen glands.

Doctors recommend your child get 2 doses of the MMR shot. Your child will need one dose at each of the following ages:

- 12 through 15 months
- 4 through 6 years

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Is it serious?

In most children, mumps is pretty mild. But it can cause serious, lasting problems, including:

- Meningitis (swelling of the tissue covering the brain and spinal cord)
- Deafness (temporary or permanent)
- Encephalitis (swelling of the brain)
- Orchitis (swelling of the testicles) in males who have reached puberty
- Oophoritis (swelling of the ovaries) and/or mastitis (swelling of the breasts) in females who have reached puberty

In rare cases, mumps is deadly.

How does mumps spread?

Mumps can spread through the saliva or mucus from the mouth, nose, or throat of an infected person when he or she:

- coughs, sneezes, or talks.
- shares items, such as cups or eating utensils, with others.
- touches objects or surfaces with unwashed hands that are then touched by others.

Mumps can spread before swollen glands appear and up to 5 days afterward.

Where can I learn more about the MMR shot and my child?

To learn more about the MMR shot, talk to your child's doctor, call 1-800-CDC-INFO, or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend children receive all vaccines according to the recommended schedule.

Whooping Cough and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against whooping cough (pertussis) is by getting the diphtheria-tetanus-pertussis shot (called DTaP). Doctors recommend that all children get the vaccine.

Why should my child get the DTaP shot?

The DTaP shot:

- Helps protect your child from whooping cough, a potentially serious disease, as well as diphtheria and tetanus.
- Helps to prevent your child from having violent coughing fits from whooping cough.
- Helps keep your child from missing school or child care (and keeps you from missing work to care for your sick child).

Is the DTaP shot safe?

Yes. The DTaP shot is very safe. Vaccines, like any medicine, can have side effects. Most children who get the DTaP shot have no side effects.

What are the side effects?

Most children don't have any side effects from the shot. The side effects that do occur are usually mild and may include:

- Redness, swelling, or pain where the shot was given
- Fever
- Vomiting

These types of side effects happen in about 1 out of every 4 children who get the shot.

More serious side effects are very rare but can include:

- A fever over 105 degrees
- Nonstop crying for 3 hours or more
- Seizures (jerking, twitching of the muscles, or staring)

CDC recommends the tetanus-diphtheria-pertussis shot for everyone 11 years old and older, including pregnant women. This shot for older children and adults is called Tdap.

What is whooping cough?

Whooping cough—or pertussis—is a very serious respiratory (in the lungs and breathing tubes) infection caused by the pertussis bacteria. It can cause violent coughing fits. Whooping cough is most harmful for young babies and can be deadly.

What are the symptoms of whooping cough?

Whooping cough starts with the following symptoms:

- Runny or stuffed-up nose
- Mild cough
- A pause in breathing in babies (apnea)

Doctors recommend that your child get five doses of the DTaP shot for best protection. Your child will need one dose at each of the following ages:

- 2 months
- 4 months
- 6 months
- 15 through 18 months
- 4 through 6 years

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Coughing can start 1 to 2 weeks after being exposed to the bacteria. Children and babies may then begin to develop these more serious problems:

- Coughing very hard, over and over. These coughing fits happen more at night.
- Gasping for breath after a coughing fit. They may make a "whooping" sound. This sound is where the name "whooping cough" comes from. Babies may not cough or make this sound—they may gag and gasp.
- Difficulty breathing, eating, drinking, or sleeping because of coughing fits.
- Turning blue (while coughing) from lack of oxygen.
- Vomiting after coughing fits.

Coughing fits can last for 10 weeks, and sometimes happen again the next time the child has a respiratory illness.

Is it serious?

Whooping cough is most dangerous for babies and young children. In fact, babies younger than 1 year old who have whooping cough may:

- Need to be cared for in the hospital
- Develop pneumonia (a serious lung infection)
- Have seizures
- Suffer brain damage

Whooping cough can even be deadly. Since 2010, up to 20 babies have died each year from whooping cough in the United States. Most of these babies don't have protection against whooping cough because they are too young to get the shots.

How does whooping cough spread?

Whooping cough spreads easily through the air when a person who has whooping cough breathes, coughs, or sneezes. Almost everyone who is not immune to whooping cough will get sick if exposed to it. A person can spread the disease from the very beginning of the sickness (when he has cold-like symptoms) and for at least 2 weeks after coughing starts.

Since symptoms can be mild for some people, your baby can catch whooping cough from adults, grandparents, or older brothers or sisters who don't know they have the disease.

How can I help protect my child against whooping cough?

- Get your Tdap shot in the third trimester of every pregnancy.
- Make sure your baby gets all of his doses of DTaP on time.
- Encourage anyone who will be in contact with your baby to be up-to-date with their whooping cough vaccine.

Do people still get whooping cough in the United States?

Yes. Since 2010, between 15,000 and 50,000 cases of whooping cough are reported each year in the United States.

Before the whooping cough vaccines were recommended for all infants, about 8,000 people in the United States died each year from whooping cough. Today, because of the vaccine, this number has dropped to fewer than 20 per year.

But, cases of whooping cough have been increasing over the past several years, and outbreaks of whooping cough can occur. We don't know exactly why the number of cases is increasing, but we think it's a combination of many different reasons, including:

- Doctors and nurses are more aware of whooping cough and recognize it more often.
- The ways we test for the disease have gotten better.
- Protection from whooping cough vaccines is not long-lasting.

Where can I learn more about the DTaP shot and my child?

To learn more about the DTaP shot, talk to your child's doctor, call 1-800-CDC-INFO, or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

Pneumococcal Disease and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against pneumococcal disease is by getting the pneumococcal shot (PCV13). Doctors recommend that all children get the vaccine.

Why should my child get the pneumococcal shot?

The pneumococcal shot:

- Protects your child from potentially serious, and even deadly infections caused by pneumococcal disease, like pneumococcal meningitis (an infection of the tissue covering the brain and spinal cord) and pneumonia (lung infection).
- Keeps your child from missing school or child care (and keeps you from missing work to care for your sick child).

Is the pneumococcal shot safe?

Yes. The pneumococcal vaccine is very safe, and it is effective at preventing pneumococcal disease. Vaccines, like any medicine, can have side effects.

What are the side effects?

Most children don't have any side effects from the shot. When side effects do occur, they are usually mild and include the following:

- Fussiness
- Sleepiness
- Loss of appetite (not wanting to eat)
- Redness, swelling, or soreness where the shot was given
- Fever

Doctors recommend that your child get four doses of the pneumococcal vaccine for best protection. Your child will need one dose at each of the following ages:

- 2 months
- 4 months
- 6 months
- 12 through 15 months

There are more than 90 types of pneumococcal bacteria. The vaccine called PCV13 protects against the 13 types that cause most of the serious illness in children.

What is pneumococcal disease?

Pneumococcal disease is an illness caused by bacteria called pneumococcus. It is often mild, but can cause serious symptoms, lifelong disability, or death. Children younger than 2 years old are among those most at risk for the disease.

What are the symptoms of pneumococcal disease?

There are many types of pneumococcal disease. Symptoms depend on the part of the body it affects.

Pneumococcal pneumonia (lung infection) causes:

- Fever or chills
- Cough
- Rapid breathing or difficulty breathing
- Chest pain

Pneumococcal meningitis (infection of the covering of the brain and spinal cord) causes:

- Stiff neck or headache
- High fever
- Increased pain from bright lights
- Confusion

In babies, meningitis may cause poor eating and drinking, low alertness, or vomiting.

Blood infection (bacteremia and sepsis) from pneumococcal disease can cause fever, chills, or low alertness.

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Pneumococcal disease causes up to half of middle ear infections (otitis media). Symptoms are ear pain; a red, swollen ear drum; or sometimes, fever or sleepiness.

Is it serious?

Pneumococcal disease ranges from mild to very dangerous. About 2,000 cases of serious disease (bacteremia, pneumonia with bacteremia, and meningitis) occur each year in children under 5 in the U.S. These illnesses can lead to disabilities like deafness, brain damage, or loss of arms or legs. About 1 out of 15 children who get pneumococcal meningitis dies.

How does pneumococcal disease spread?

Pneumococcal disease spreads when an infected person coughs or sneezes. Some children may not even feel sick, but they could have the bacteria in their noses and throats. These children can still spread pneumococcal disease.

Do children in the United States still get pneumococcal disease?

Yes. Each year in the U.S., pneumococcal disease causes thousands of cases of pneumonia and ear infections. Without vaccines, there would be many more cases. Among children, those younger than 2 years old are most likely to have a serious case of pneumococcal disease.

How can I learn more about the pneumococcal vaccine and my child?

To learn more about the pneumococcal vaccine, talk to your child's doctor, call 1-800-CDC-INFO or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

Polio and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against polio is to get the polio vaccine, also called IPV (or inactivated poliovirus vaccine). Doctors recommend all children get the vaccine.

What is polio?

Polio (or poliomyelitis) is a disease caused by poliovirus. It can cause lifelong paralysis (can't move parts of the body), and it can be deadly.

Why should my child get the polio shot?

The polio shot:

- Protects your child from polio, a potentially serious disease.
- Prevents your child from developing lifelong paralysis from polio.

Is the polio shot safe?

Yes. The polio vaccine is very safe and effective at preventing polio.

Doctors recommend that your child get four doses of the polio vaccine (also called IPV) for best protection. Your child will need one dose at each of the following ages:

- 2 months
- 4 months
- 6 through 18 months
- 4 through 6 years

What are the side effects?

Vaccines, like any medicine, can have side effects. Most children who get polio shots have no side effects. When side effects do occur, they are usually mild, like temporary redness and pain where the shot was given.

What are the symptoms of poliovirus infection?

Most people who get infected with poliovirus do not have any symptoms. Some people (25 people out of 100) will have flu-like symptoms. These symptoms usually last 2 to 5 days.

In rare cases, poliovirus infection can be very serious. About 1 out of 200 people will have weakness or paralysis in their arms, legs, or both. This paralysis or weakness can last a lifetime.

Is it serious?

The risk of lifelong paralysis is very serious. Even children who seem to fully recover can develop new muscle pain, weakness, or paralysis as adults, 15 to 40 years later.

About 2 to 10 children out of 100 who have paralysis from polio die because the virus affects the muscles that help them breathe.

How does polio spread?

Poliovirus is very contagious. It spreads through contact with the stool (poop) of an infected person or droplets from a sneeze or cough. If you get stool or droplets from an infected person on your hands and you touch your mouth, you can get infected. Also, if your child puts objects, like toys, that have stool or droplets on them into their mouth, they can get infected.

An infected person may spread the virus to others immediately before and usually 1 to 2 weeks after developing symptoms. The virus may live in an infected person's stool for many weeks. He or she can contaminate food and water when they touch it with unwashed hands.

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Do people still get polio in the United States?

No, the United States has been polio-free for more than 30 years, but the disease still occurs in other parts of the world. It would only take one person with polio traveling from another country to bring polio back to the United States.

Where can I learn more about the polio shot and my child?

To learn more about the polio shot, talk to your child's doctor, call 1-800-CDC-INFO or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

Rotavirus and the Vaccine (Drops) to Prevent It

Last updated April 2017

The best way to protect against rotavirus is to get rotavirus vaccine. Doctors recommend all children get the vaccine.

Why should my child get rotavirus vaccine?

The rotavirus vaccine:

- Protects your child from rotavirus, a potentially serious disease.
- Prevents your child from developing diarrhea, vomiting, and stomach pain caused by rotavirus.
- Keeps your child from missing school or childcare (and keeps you from missing work to care for your sick child).

Is rotavirus vaccine safe?

Both rotavirus vaccines (RotaTeq and Rotarix) are very safe and effective at preventing rotavirus disease. Millions of babies in the United States have gotten the vaccine safely.

What are the side effects?

Side effects are rare, usually mild, and may include fussiness, diarrhea, and vomiting.

Some studies have shown a small rise in cases of intussusception within a week after the first or second dose of rotavirus vaccine. Intussusception is a type of bowel blockage that is treated in a hospital. Some babies might need surgery. Studies estimate a risk ranging from about 1 intussusception case in every 20,000 infants to 1 intussusception case in every 100,000 infants after vaccination.

There are 2 brands of rotavirus vaccine: RotaTeq and Rotarix. They are both given by mouth, not by a shot.

What is rotavirus?

Rotavirus causes severe diarrhea and vomiting. It affects mostly babies and young children. Diarrhea and vomiting can lead to serious dehydration (loss of body fluid). If dehydration is not treated, it can be deadly.

What are the symptoms of rotavirus?

Rotavirus symptoms include the following:

- Fever
- Watery diarrhea
- Vomiting
- Stomach pain

Diarrhea and vomiting can last for 3 to 8 days. Children may stop eating and drinking while they are sick.

Doctors recommend your child get two or three doses of the vaccine (depending on the brand of vaccine) for best protection. Babies should get the first dose at 2 months of age. For both vaccine brands, babies get a second dose at 4 months. If he's getting RotaTeq, he'll need a third dose at 6 months.

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Is it serious?

Rotavirus can be very harmful. Diarrhea, vomiting, and fever can cause a loss of body fluids. This leads to dehydration, which can be very dangerous, especially for babies and young children. Some children need an IV (needle in their vein) in the hospital to replace lost fluids.

How does rotavirus spread?

Rotavirus spreads easily. The virus is in the stool (poop) of people who are infected. A person can get sick if they touch an object contaminated with rotavirus and put their hand in their mouth or consume contaminated food or drinks. The disease commonly spreads in families, hospitals, and childcare centers.

Rotavirus can live on objects for several days. It is very difficult to stop its spread just by hand washing or disinfecting surfaces. The best way to protect young children from rotavirus is to get them vaccinated.

Where can I learn more about the rotavirus vaccine and my child?

To learn more about the rotavirus vaccine, talk to your child's doctor, call 1-800-CDC-INFO or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

Rubella and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against rubella is by getting the measles-mumps-rubella shot (called the MMR shot). Doctors recommend all children get the MMR shot.

Why should my child get the MMR vaccine?

The MMR shot:

- Protects your child from rubella, a potentially serious disease, as well as measles and mumps.
- Prevents your child from spreading rubella to a pregnant woman whose unborn baby could develop serious birth defects or die if the mother gets rubella.
- Prevents your child from getting a rash and fever from rubella.
- Keeps your child from missing school or child care (and keeps you from missing work to care for your sick child).

Is the MMR shot safe?

Yes. The MMR shot is very safe and effective at preventing measles, mumps, and rubella. Vaccines, like any medicine, can have side effects. Most children who get the MMR shot have no side effects.

What are the side effects?

Most children do not have any side effects from the shot. The side effects that do occur are usually very mild, such as a fever, rash, soreness or swelling where the shot was given, or temporary pain and stiffness in the joints (mostly in teens and adults). More serious side effects are rare. These may include high fever that could cause a seizure.

Is there a link between the MMR shot and autism?

No. Scientists in the United States and other countries have carefully studied the MMR shot. No studies have found a link between autism and the MMR shot.

What is rubella?

Rubella, sometimes called "German measles," is a disease caused by a virus. The infection is usually mild with fever and a rash. But, if a pregnant woman gets infected, she can have a miscarriage, her baby can die just after birth, or her unborn baby can develop serious birth defects.

What are the symptoms of rubella?

In children, rubella usually causes the following symptoms that last 2 or 3 days:

- Rash that starts on the face and spreads to the rest of the body
- Low fever (less than 101 degrees)

Before the rash appears, older children and adults may also have:

- Swollen glands
- Cough, runny nose, and red eyes
- Aching joints (especially in young women)

Doctors recommend your child get 2 doses of MMR vaccine. Your child will need one dose at each of the following ages:

- 12 through 15 months and
- 4 through 6 years

CS HCVG15-CHD-141 05/30/2017

About half of the people who get rubella do not have symptoms.

Is it serious?

Rubella is usually mild in children. Complications are not common, but they occur more often in adults. In rare cases, rubella can cause serious problems, including brain infections and bleeding problems.

Rubella is most dangerous for a pregnant woman's developing baby. Infection during pregnancy can cause miscarriage, or birth defects like deafness, blindness, intellectual disability, heart defects, and liver or spleen damage.

How does rubella spread?

Rubella spreads when an infected person coughs or sneezes.

The disease is most contagious when the infected person has a rash. But it can spread up to 7 days before the rash appears and up to 7 days after. People without symptoms can still spread rubella.

Where can I learn more about the MMR shot and my child?

To learn more about the MMR shot, talk to your child's doctor, call 1-800-CDC-INFO or visit www.cdc.gov/vaccines/parents.

Rubella is dangerous for a pregnant woman. If she gets rubella, she could have a miscarriage or her baby could be born with birth defects.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

Tetanus and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against tetanus is by getting the diphtheria-tetanus-pertussis shot (called DTaP). Doctors recommend that all children get the shot.

Why should my child get the DTaP shot?

The DTaP shot:

- Protects your child from tetanus, a potentially serious disease, as well as diphtheria and whooping cough (pertussis).
- Protects your child from painful muscle stiffness from tetanus.
- Keeps your child from missing school or childcare (and keeps you from missing work to care for your sick child).

Is the DTaP shot safe?

Yes. The DTaP shot is very safe, and it is effective at preventing tetanus. Vaccines, like any medicine, can have side effects. Most children who get the shot have no side effects.

What are the side effects?

Most children don't have any side effects from the shot. When side effects do occur, they are usually mild and may include:

- Redness, swelling, or pain where the shot was given
- Fever
- Vomiting

These types of side effects happen in about 1 out of every 4 children who get the shot.

More serious side effects are very rare but can include:

- A fever over 105 degrees
- Nonstop crying for 3 hours or more
- Seizures (jerking, twitching of the muscles, or staring)

What is tetanus?

Tetanus is a serious disease caused by a toxin (poison) made by bacteria. It causes painful muscle stiffness and can be deadly.

What are the symptoms of tetanus?

Tetanus in children starts with headache, jaw cramping, and muscle spasms (sudden, involuntary muscle tightening).

It also causes the following:

- Painful muscle stiffness all over the body
- Trouble swallowing
- Seizures
- Fever and sweating
- High blood pressure and fast heart rate

Tetanus is often called "lockjaw" because the jaw muscles tighten, making it hard to open the mouth.

Doctors recommend that your child get five doses of the DTaP vaccine for best protection. Your child will need one dose at each of the following ages:

- 2 months
- 4 months
- 6 months
- 15 through 18 months
- 4 through 6 years

CS HCVG15-CHD-144 05/30/2017

Is it serious?

Tetanus is very dangerous. It can cause breathing problems, muscle spasms, and paralysis (unable to move parts of the body). Muscle spasms can be strong enough to break a child's spine or other bones.

It can take months to recover fully from tetanus. A child might need weeks of hospital care. As many as 1 out of 5 people who get tetanus dies.

How could my child get tetanus?

The bacteria that cause tetanus are found in soil, dust, and manure. They get into the body through a puncture, cut, or sore on the skin. A person can also be infected after a burn or an animal bite.

Tetanus does not spread from one person to another.

Where can I learn more about the DTaP shot and my child?

To learn more about the DTaP shot, talk to your child's doctor, call 1-800-CDC-INFO or visit www.cdc.gov/vaccines/parents.

Booster vaccines needed to keep up protection from tetanus

The DTaP shot does not offer lifetime protection. People need booster vaccines to maintain protection from tetanus.

Children should get a booster vaccine called Tdap (which helps protect against tetanus, diphtheria, and whooping cough) at 11 or 12 years old. Anyone who does not get Tdap at that age should get one dose as a replacement for their 10-year Td booster shot.

Adults need a booster called the Td vaccine (for tetanus and diphtheria) every 10 years.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

Chickenpox and the Vaccine (Shot) to Prevent It

Last updated April 2017

The best way to protect against chickenpox (also called varicella) is by getting the chickenpox shot. Doctors recommend all children who have never had chickenpox get the shot.

Why should my child get the chickenpox shot?

The chickenpox shot:

- Protects your child from chickenpox, a potentially serious and even deadly disease.
- Keeps your child from missing up to one week of school or child care (and keeps you from missing work to care for your sick child).

Is the chickenpox shot safe?

Yes. The chickenpox shots are very safe and effective at preventing chickenpox. Vaccines, like any medicine, can have side effects, but most children who get the chickenpox shot have no side effects.

What are the side effects?

Most children don't have any side effects from the shot. However, some children may experience the following side effects:

- Soreness, redness, or swelling where the shot was given
- Fever
- Mild rash
- Temporary pain and stiffness in the joints

What is chickenpox?

Chickenpox is a disease that causes an itchy rash of blisters and a fever. A person with chickenpox may have as many as 500 blisters. The rash can spread over the whole body. Chickenpox can be serious, even life-threatening, especially in babies, adolescents, adults, pregnant women and people with weakened immune systems.

What are the symptoms of chickenpox?

Chickenpox usually causes the following symptoms:

- An itchy rash of blisters
- Fever
- Headache
- Feeling tired

Symptoms usually last 7 to 10 days. In some cases, chickenpox can cause serious problems.

Doctors recommend your child get two doses of the chickenpox shot for best protection. Your child will need one dose at each of the following ages:

- 12 through 15 months
- 4 through 6 years

CS HCVC15-CHD-103 05/30/2017

Is it serious?

Chickenpox is usually mild in children, but the itching can be very uncomfortable. Children who get chickenpox can miss about a week of school or child care.

Before the vaccine was available, about 4 million people got chickenpox each year in the United States, over 10,500 of those people were hospitalized, and about 100-150 people died.

In some cases, chickenpox can cause serious problems, such as:

- Skin infections
- Dehydration (loss of body fluids)
- Pneumonia (an infection in the lungs)
- Encephalitis (swelling of the brain)

How does chickenpox spread?

Chickenpox spreads easily, mainly when a person touches or breathes in the virus particles that come from chickenpox blisters. It can also spread through tiny droplets that get into the air when someone who has chickenpox breathes or talks, for example. Chickenpox can spread 1 to 2 days before the infected person gets a rash until all the blisters have formed scabs.

Why not let my child get chickenpox naturally and build natural immunity?

Chickenpox is a mild disease for many children, but not all. There's no way to know who will have a serious case. When your child gets the chickenpox shots, he or she is getting immunity from chickenpox without the risk of serious complications of the disease.

Where can I learn more about the chickenpox shot and my child?

To learn more about the chickenpox shot, talk to your child's doctor, call 1-800-CDC-INFO, or visit www.cdc.gov/vaccines/parents.

The Centers for Disease Control and Prevention, American Academy of Family Physicians, and the American Academy of Pediatrics strongly recommend all children receive their vaccines according to the recommended schedule.

Need Help Responding to Vaccine-Hesitant Parents?

Science-based materials are available from these respected organizations

American Academy of Pediatrics (AAP)

Healthcare providers can find numerous resources on the AAP's website to help with parents and caregivers who have questions about vaccinating their child at www.healthychildren.org/english/safety-prevention/immunizations/pages/default.aspx. When parents cannot be convinced, consider using AAP's Refusal to Vaccinate form at www.aap.org/en-us/documents/immunization_refusalto-vaccinate.pdf.

California Department of Public Health

The Immunization Branch of the California Department of Public Health has developed several excellent provider pieces that discuss common questions parents may have regarding vaccines for their children. These include

- "Vaccine Safety: Answers to Parents' Top Questions" – www.eziz.org/assets/docs/IMM-916.pdf
- "Community Immunity" – www.eziz.org/assets/docs/IMM-1056.pdf

Centers for Disease Control and Prevention (CDC)

Among CDC's many online immunization resources is the "Parent's Guide to Childhood Immunization," a 64-page booklet that can be ordered or printed at www.cdc.gov/vaccines/pubs/parents-guide. In addition, visit CDC's "Talking to Parents about Vaccines" web section at www.cdc.gov/vaccines/hcp/conversations/conv-materials.html.

Other CDC materials, designed to help healthcare providers work with hesitant parents, include the following:

- "If You Choose Not to Vaccinate Your Child, Understand the Risks and Responsibilities" – www.cdc.gov/vaccines/hcp/patient-ed/conversations/downloads/not-vacc-risks-color-office.pdf
- "Infant Immunizations FAQs" – www.cdc.gov/vaccines/parents/parent-questions.html

Immunization Action Coalition (IAC)

IAC's Talking about Vaccines web section provides healthcare professionals with top vaccination resources from trusted sources such as CDC, AAP, IAC, VEC, and many more. Visit www.immunize.org/talking-about-vaccines. Refer parents to IAC's website for the public at www.vaccineinformation.org.

IAC has developed several patient handouts for vaccine-hesitant parents. These include:

- "Clear Answers and Smart Advice About Your Baby's Shots," an excerpt from the popular book "Baby 411" by Dr. Ari Brown – www.immunize.org/catg.d/p2068.pdf
- "Decision to Not Vaccinate My Child" – www.immunize.org/catg.d/p4059.pdf
- "Reliable Sources of Immunization Information: Where Parents Can Go to Find Answers!" – www.immunize.org/catg.d/p4012.pdf
- "Vaccines Work!" – www.immunize.org/catg.d/p4037.pdf

Institute for Vaccine Safety, Johns Hopkins University

The Institute for Vaccine Safety collects vaccine-specific safety information. Of particular interest is its "Components of Vaccines" section, which contains tables specifying the contents of various vaccines: www.vaccinesafety.edu/components.htm.

Vaccinate Your Family (formerly Every Child By Two)

Created by Vaccine Your Family, www.vaccinateyourfamily.org/questions-about-vaccines focuses on answering parents' commonly asked questions about vaccines. It features video clips and links to current vaccine news stories.

Vaccine Education Center (VEC) Children's Hospital of Philadelphia

VEC offers handouts in English and Spanish as well as four colorful booklets covering immunization of infants, teens, and adults, as well as one about vaccine safety. These educational materials can be downloaded at www.chop.edu/centers-programs/vaccine-education-center/resources. VEC has developed a number of patient handouts covering vaccine topics of interest. These include the following:

- "Vaccine Safety: Are Vaccines Safe?" – www.chop.edu/centers-programs/vaccine-education-center/vaccine-safety/are-vaccines-safe
- "Vaccine Safety: Dosing Safety" – www.chop.edu/centers-programs/vaccine-education-center/vaccine-safety/dosing-safety
- "Vaccine Safety: Immune System and Health – www.chop.edu/centers-programs/vaccine-education-center/vaccine-safety/immune-system-and-health
- "Vaccine Ingredients" – www.chop.edu/centers-programs/vaccine-education-center/vaccine-ingredients

For parents with concerns about vaccines and autism

AAP has issued a statement that can be printed at www.healthychildren.org/English/health-issues/conditions/Autism/Pages/Where-We-Stand-Autism.aspx. Parents may wish to investigate further at www.healthychildren.org/English/health-issues/conditions/Autism/Pages/default.aspx IAC also recommends these books:

- *Autism's False Prophets: Bad Science, Risky Medicine, and the Search for a Cure,* by Paul A. Offit, MD
- *Unstrange Minds: Remapping the World of Autism,* by Roy Richard Grinker, PhD

And, here are two more well-researched handouts for parents, one from IAC and another from VEC:

- "MMR Vaccine Does Not Cause Autism: Examine the Evidence!" – www.immunize.org/catg.d/p4026.pdf
- "Vaccines and Autism: What you should know" – https://media.chop.edu/data/files/pdfs/vaccine-education-center-autism.pdf

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www.immunize.org/catg.d/p2070.pdf ▪ Item #P2070 (5/19)

A Step-By-Step Guide to Selecting and Using a Digital Data Logger for Vaccine Inventory

Determine the number of devices

Follow CDC recommendations & VFC requirements

https://www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf

Check with state/local Immunization Program for additional requirements and recommendations

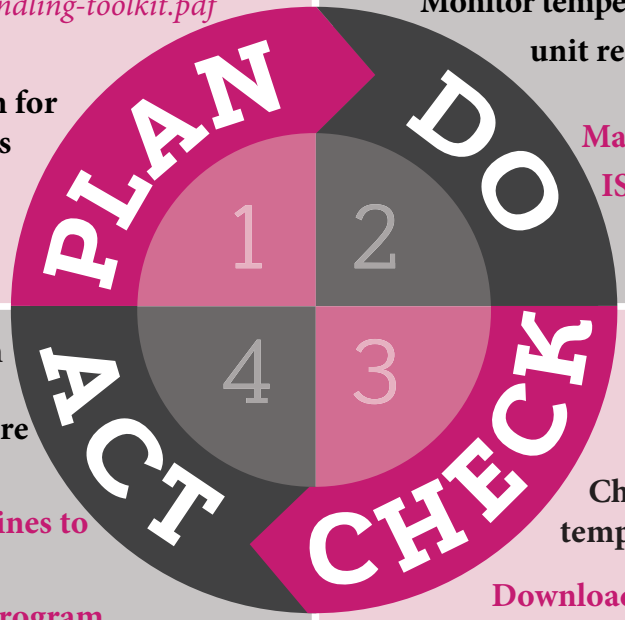
Keep staff skills and capabilities in mind

Follow manufacturer instructions

Set-up a device for each vaccine storage unit

Monitor temperatures to assure storage unit remains in-range

Maintain current/valid ISO17025 or equivalent certificate of calibration testing for each device



Read and record Min/Max/Current temperatures daily

Check for out of range temperature alarms

Download and review data

Stop & check when alarm triggers

Assure probe is located with vaccine in center of unit

Take immediate action when alarm triggers or out-of-range temperature is discovered

- If needed, move vaccines to correct temperature
- Call immunization program
- Call vaccine manufacturer

Document alarm occurrence according to requirements

For more information go to: immunizationmanagers.org/VSH

Educational resource created with support from Berlinger USA

Using A Data Logger – The Details

PLAN 1

- Obtain multiple devices: one for each storage unit and one backup device with different calibration testing dates
- Ensure each device meets CDC requirements:
  - ✓ Temperature probe
  - ✓ Active temperature visibly displayed on the outside of the unit
  - ✓ Capacity for continuous temperature monitoring, recording and downloading
- Contact the Immunization Program for additional device requirements and policy/procedures for alarm notification, reporting and calibration testing
- Confirm that report shows alarms, temperature ranges (highest and lowest) and duration of excursions
- Check for Immunization Program or manufacturer training
- Consider other CDC recommendations:
  - ✓ Detachable probe in a thermal, buffered material (e.g., glycol)
  - ✓ Alarm for out-of-range temperatures; audible and visual alarms preferred
  - ✓ Current, minimum, and maximum temperature display
  - ✓ Low battery indicator
  - ✓ Memory: Minimum 4,000 readings or 39 days
  - ✓ Accuracy of +/- 1°F (0.5°C)
  - ✓ User programmable logging interval (or reading rate) at a maximum time interval of every 30 minutes.

DO 2

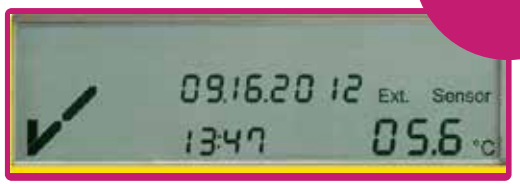
- Reference manufacturer resources for set-up and installation
- Place probe in the middle of the unit with vaccines
- Thread probe wire through door hinge side of the unit and tape in place (inside & outside the unit) or place wire in storage unit portal designed for that purpose
- Contact manufacturer and/or Immunization Program for installation trouble shooting
- Monitor temperature and replace vaccine storage unit if it does not maintain in-range temperatures
- Keep track of expiry date and ISO certificate of calibration testing for each device

CHECK 3

- Read and record temperatures at least 1x daily noting data/time/temp/initials
  - Assess at the start of clinic day and prior to vaccine administration
  - Log recording in paper or electronic format
- Download and review reports weekly
  - PDF reports simplify record keeping

ACT 4

- Take immediate action when there is an alarm or out of range temperature
  - If needed, move vaccines to a storage unit with correct temperatures and quarantine vaccine
  - Print report and look for clues to the problem e.g. is the ave. temperature 5.0°C (41°F)?
    - If not is it too cold or too warm in the unit?
  - Document the actions taken and duration of the alarm period with the highest or lowest temp.
  - Communicate alarm information to Immunization Program and vaccine manufacturer
- Maintain reports per Immunization Program/CDC requirements



Display screen

Thread flat wire through gasket on hinged side of unit

Stabilize vial with probe on shelf

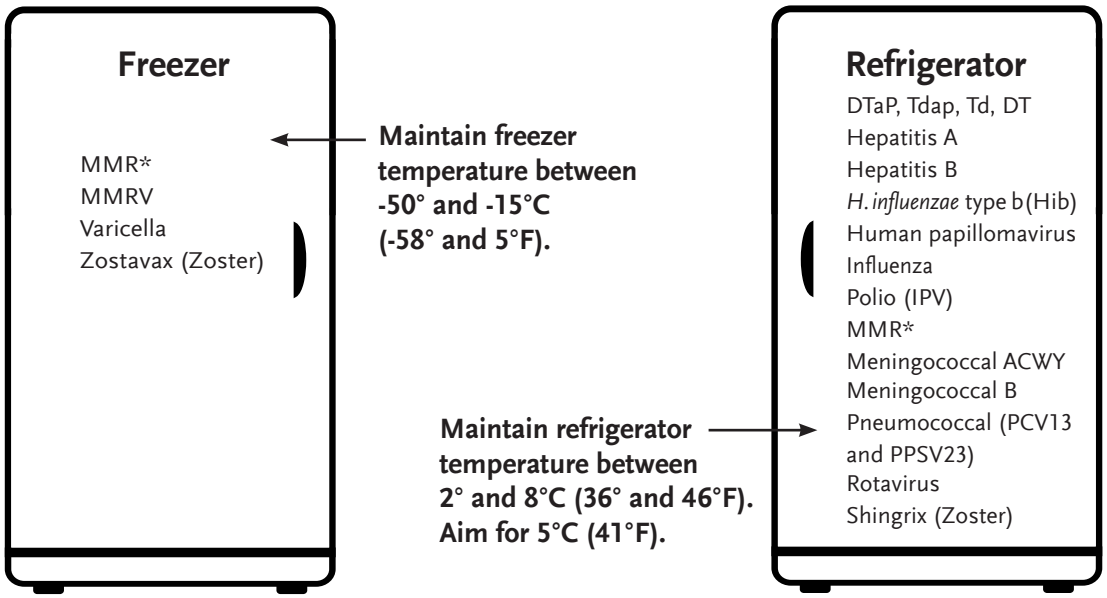
Duct tape wire to wall

For more information go to:
www.immunizationmanagers.org

Educational resource created with support from Berlinger USA

Vaccine Handling Tips

REMEMBER: Improperly stored or outdated vaccines won't protect your patients!



Manage vaccine inventories.

Inventory your vaccine supplies at least monthly and before placing an order. Expired vaccine must never be used, and it becomes "cash in the trash!"

Always use the vaccine with the soonest expiration date first.

Move vaccine with the soonest expiration date to the front of the storage unit and mark it to be used first. These actions help ensure it will be picked up first by someone selecting vaccine from the unit.

Store vaccine appropriately.†

Place vaccines in refrigerator or freezer immediately upon receiving shipment. Keep vaccine vials in their original packaging. Place vaccine in clearly labeled‡ baskets or other containers with a 2–3" separation between baskets and 4" from the wall of unit. Separate or clearly mark vaccines to distinguish those that were supplied from your state's Vaccines for Children program (or other state-funded source) from those that were privately purchased. Do not store vaccines in the door or on the floor of the unit.

Stabilize temperatures.

Store ice packs in the freezer and large jugs of water in the refrigerator along with the vaccines. This will help maintain a stable, cold temperature in case of a power failure or if the refrigerator or freezer doors are opened frequently or are accidentally left open. Because frequent opening of either the refrigerator or freezer door can lead to temperature variations that could affect vaccine efficacy, you should not store food or beverages in the refrigerator or freezer.

Safeguard the electrical supply to the storage unit.

Make sure the refrigerator and freezer are plugged into outlets in a protected area where they cannot be disconnected accidentally. Label the refrigerator, freezer, electrical outlets, fuses, and circuit breakers on the power circuit with information that clearly identifies the perishable nature of vaccines and the immediate steps to be taken in case of interruption of power.§ If your building has auxiliary power, use the outlet supplied by that system.

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*MMR may be stored in either the freezer or the refrigerator.

†Refer to package insert for specific instructions on the storage of each vaccine. If you have questions about the condition of the vaccine upon arrival, immediately place the vaccine in recommended storage, mark it "do not use," and then call your state health department or the vaccine manufacturer(s) to determine whether the potency of the vaccine(s) has been affected. For other questions, call the immunization program at your state or local health department.

‡For help with organizing and labeling vaccines, consider using resources developed by and available from CDC at www.cdc.gov/vaccines/hcp/admin/storage/guide/vaccine-storage-labels.pdf and www.cdc.gov/vaccines/hcp/admin/storage/guide/vaccine-storage-labels-flu.pdf.

§For easy help with labeling units and power supplies, see IAC signs "Do Not Unplug Refrigerator or Freezer" (www.immunize.org/catg.d/p2090.pdf) and "Do Not Turn Off Power to Circuit Breaker" (www.immunize.org/catg.d/p2091.pdf). For guidance on steps to take during a power interruption, see IAC's "Emergency Response Worksheet" (www.immunize.org/catg.d/p3051.pdf).

Technical content reviewed by the Centers for Disease Control and Prevention

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www.immunize.org/catg.d/p3048.pdf ▪ Item #P3048 (2/18)

Checklist for Safe Vaccine Storage and Handling

Are you doing everything you should to safeguard your vaccine supply? Review this list to see where you might make improvements in your vaccine management practices. Check each listed item with either YES *or* NO .

Establish Storage and Handling Policies

YES NO 1. We have designated a primary vaccine coordinator and at least one alternate coordinator to be in charge of vaccine storage and handling at our facility.

YES NO 2. Both the primary and alternate vaccine coordinator(s) have completely reviewed either CDC's Vaccine Storage & Handling Toolkit (www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf) or equivalent training materials offered by our state or local health department's immunization program.

YES NO 3. We have detailed, up-to-date, written standard operating procedures for general vaccine management, including procedures for routine activities and an emergency vaccine retrieval and storage plan for power outages and other problems. Our procedures are based on CDC's Vaccine Storage & Handling Toolkit and/or on instruction from our state or local health department's immunization program.

YES NO 4. We review these policies with all staff annually and with new staff, including temporary staff, when they are hired.

Log In New Vaccine Shipments

5. We maintain a vaccine inventory log that we use to document the following:

YES NO a. Vaccine name and number of doses received

YES NO b. Date we received the vaccine

YES NO c. Condition of vaccine when we received it

YES NO d. Vaccine manufacturer and lot number

YES NO e. Vaccine expiration date

Use Proper Storage Equipment

YES NO 6. We store vaccines in separate, self-contained units that refrigerate or freeze only. If we must use a household-style combination unit, we use it only for storage of our refrigerated vaccines, maintaining frozen vaccines in a separate stand-alone freezer.

YES NO 7. We store vaccines in units with enough room to maintain the year's largest inventory without crowding.

YES NO 8. We never store any vaccines in a dormitory-style unit (a small combination freezer-refrigerator unit with the freezer compartment inside the refrigerator).

YES NO 9. We use only calibrated temperature monitoring devices (TMD) that have a Certificate of Calibration Testing* ("Report of Calibration") and are calibrated every 1 to 2 years from the last calibration testing date or according to the manufacturer's suggested timeline. If storing Vaccines For Children (VFC) vaccine, our TMD is a digital data logger (DDL).

YES NO 10. We have planned back-up storage unit(s) in the event of a power failure or other unforeseen event.

* Certificate of Calibration Testing ("Report of Calibration") with calibration measurements traceable to a laboratory with accreditation from the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA) signatory body.

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www.immunize.org/catg.d/p3035.pdf • Item #P3035 (8/18)

Ensure Optimal Operation of Storage Units

YES NO 11. We have a "Do Not Unplug" sign (e.g., www.immunize.org/catg.d/p2090.pdf) next to the electrical outlets for the refrigerator and freezer and a "Do Not Stop Power" warning label (e.g., www.immunize.org/catg.d/p2091.pdf) by the circuit breaker for the electrical outlets. Both signs include emergency contact information.

YES NO 12. We perform regular maintenance on our vaccine storage units to assure optimal functioning. For example, we keep the units clean, dusting the coils and cleaning beneath the units as recommended by the manufacturer.

Maintain Correct Temperatures

YES NO 13. We always keep at least one accurate (+/- 0.5°C [+/- 1°F]) calibrated temperature monitoring device (TMD) with the vaccines in the refrigerator and a separate calibrated TMD with the vaccines in the freezer.

14. We use a temperature monitoring device (TMD) that

YES NO a. uses an active display to provide continuous monitoring information.

YES NO b. is digital and has a detachable probe that has been buffered against sudden temperature changes by being immersed in a vial filled with liquid (e.g., glycol, ethanol, glycerin), loose media (e.g., sand, glass beads), or a solid block of material (e.g., aluminum, Teflon®).

YES NO c. includes an alarm for out-of-range temperatures.

YES NO d. has a low-battery indicator.

YES NO e. has a digital data logger that indicates current, minimum, and maximum temperatures.

YES NO f. can measure temperatures within +/- 0.5°C (+/- 1°F).

YES NO g. has a logging interval (or reading rate) that can be programmed by the user to measure and record temperatures AT LEAST every 30 minutes.

YES NO 15. We maintain the refrigerator temperature at 2–8°C (36–46°F), and we aim for 5°C (41°F).

YES NO 16. We maintain the freezer temperature between -50°C and -15°C (-58°F and +5°F).

YES NO 17. We set the thermostat for the refrigerator and the freezer at the factory-set or midpoint temperatures.

YES NO 18. We keep extra containers of water in the refrigerator (e.g., in the door and/or on the floor of the unit where the vegetable bins were located) to help maintain cool temperatures. We keep ice packs, ice-filled containers, or frozen water bottles in the freezer to help maintain cold temperatures and to have frozen water bottles available for conditioning in the event of an emergency.

Maintain Daily Temperature Logs

YES NO 19. If we are using a TMD (preferably a digital data logger or DDL) that records minimum and maximum temperatures, we check and record these temperatures first thing in the morning during each workday when our practice is open. (See selections for recording at www.immunize.org/clinic/storage-handling.asp.)

YES NO 20. If we are using a TMD that does not record minimum and maximum temperatures, we check and record the current temperatures of the refrigerator and freezer at least twice each workday. (See selections for recording at www.immunize.org/clinic/storage-handling.asp.)

YES NO 21. We consistently record temperatures on the log either in Celsius or Fahrenheit. We never mix temperature scales when we record our temperatures.

YES NO 22. If the temperature log prompts us to insert an "x" by the temperature that's preprinted on the form, we do not attempt to write in the actual temperature.

YES NO 23. We follow the directions on the temperature log to call appropriate personnel if the temperature in a storage unit goes out of range.

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YES NO 24. If out-of-range temperatures occur in the unit, we complete the Vaccine Storage Troubleshooting Record (www.immunize.org/catg.d/p3041.pdf) to document actions taken when the problem was discovered and what was done to prevent a recurrence of the problem.

YES NO 25. Trained staff (other than staff designated to record the temperatures) review the temperature logs weekly.

YES NO 26. We keep the temperature logs on file for at least 3 years.

Store Vaccines Correctly

YES NO 27. We post signs (e.g., www.immunize.org/catg.d/p3048.pdf) on the doors of the refrigerator and freezer that indicate which vaccines should be stored in the refrigerator and which in the freezer.

YES NO 28. We do not store any food or drink in any vaccine storage unit.

YES NO 29. We store vaccines in the middle of the refrigerator or freezer (away from walls and vents), leaving room for air to circulate around the vaccine. We never store vaccine in the doors.

YES NO 30. We have removed all vegetable and deli bins from the storage unit, and we do not store vaccines in these empty areas.

YES NO 31. If we must use a combination refrigerator-freezer unit, we store vaccines only in the refrigerator section of the unit. We do not place vaccines in front of the cold-air outlet that leads from the freezer to the refrigerator (often near the top shelf). In general, we try to avoid storing vaccines on the top shelf, and we place water bottles in this location.

YES NO 32. We check vaccine expiration dates and rotate our supply of each type of vaccine so that vaccines with the earliest expiration dates are located close to the front of the storage unit, facilitating easy access.

YES NO 33. We store vaccines in their original packaging with the lids closed in clearly labeled containers.

Take Emergency Action As Needed

34. In the event that vaccines are exposed to improper storage conditions, we take the following steps:

YES NO a. We restore proper storage conditions as quickly as possible. If necessary, we label the vaccine "Do Not Use" and move it to a unit where it can be stored under proper conditions. We do not discard the vaccine before discussing the circumstances with our state/local health department and/or the appropriate vaccine manufacturers.

YES NO b. We follow the Vaccine Storage Troubleshooting Record's (www.immunize.org/catg.d/p3041.pdf) instructions for taking appropriate action and documenting the event. This includes recording details such as the length of time the vaccine was out of appropriate storage temperatures and the current room temperature, as well as taking an inventory of affected vaccines.

YES NO c. We contact our clinic supervisor or other appropriate clinic staff to report the incident. We contact our state/local health department and/or the appropriate vaccine manufacturers for consultation about whether the exposed vaccine can still be used.

YES NO d. We address the storage unit's mechanical or electrical problems according to guidance from the unit's manufacturer or a qualified repair service.

YES NO e. In responding to improper storage conditions, we do not make frequent or large changes in thermostat settings. After changing the setting, we give the unit at least a day to stabilize its temperature.

YES NO f. We do not use exposed vaccines until our state/local health department's immunization program or the vaccine manufacturer has confirmed that the vaccine is acceptable for use. We review this information with our clinic medical director before returning the vaccine to our supply. If the vaccine is not acceptable for use, we follow our state/local health department instructions for vaccine disposition.

If we answer YES to all of the above, we give ourselves a pat on the back! If not, we assign someone to implement needed changes!

Don't Be Guilty of These **Preventable** Errors in Vaccine Storage and Handling!

*Do you see your clinic or practice making any of these frequently reported errors in vaccine storage and handling? Although some of these errors are much more serious than others, none of them should occur. Be sure your healthcare setting is not making any of these **preventable** errors.*

ERROR: Designating only one person, rather than at least two, to be responsible for storage and handling of vaccines

- Everyone in the office should know the basics of vaccine handling, including what to do when a shipment arrives and what to do in the event of an equipment failure or power outage.
- Train at least one back-up person. The back-up and primary persons should be equally familiar with all aspects of vaccine storage and handling, including knowing how to handle vaccines when they arrive, how to properly record refrigerator and freezer temperatures, what to do when an out-of-range temperature occurs, and how to appropriately respond to an equipment problem or power outage.

ERROR: Storing vaccine inappropriately

- Be sure all office staff (especially persons involved in receiving vaccine shipments) understand the importance of properly storing vaccines immediately after they arrive.
- Know which vaccines should be refrigerated and which should be frozen. Storage information is found in the package insert. For quick reference, post IAC's *Vaccine Handling Tips* (www.immunize. org/catg.d/p3048.pdf) on the refrigerator and freezer.
- Always store vaccines (and temperature monitoring devices) in the body of the refrigerator – not in the vegetable bins, on the floor, next to the walls, in the door, or near the cold air outlet from the freezer. The temperature in these areas may differ significantly from the temperature in the body of the unit.
- Don't over-pack the unit. Place the vaccine packages in such a way that air can circulate around the compartment.
- Always store vaccines in their original packaging.

ERROR: Using the wrong type of equipment

STORAGE UNITS

- CDC recommends storing vaccines in separate, self-contained units that only refrigerate or only freeze. If a combination refrigerator/freezer must be used, only refrigerated vaccines should be stored in the unit, and a separate stand-alone freezer should be used for frozen vaccines.
- Never store vaccines in a "dormitory-style" unit (i.e., a small refrigerator-freezer unit with one exterior door and a freezer compartment inside the refrigerator). These units cannot maintain stable temperatures.

TEMPERATURE MONITORING DEVICES/DIGITAL DATA LOGGERS

- Use only temperature monitoring devices (digital data loggers [DDL] preferred and required for VFC vaccine storage) for continuous temperature monitoring and recordings. Set the DDL to measure and record temperatures no less than every 30 minutes. Be sure the DDL has a current and valid Certificate of Calibration Testing (aka Report of Calibration).
- Buffer the DDL's temperature probe by placing it in glycol, glass beads, sand, ethanol, glycerin, aluminum, or Teflon®. Use of a buffer ensures you are not just measuring air temperature, which is subject to fluctuation when you open the door.

For more detailed information, see the *Vaccine Storage and Temperature Monitoring* Equipment section of CDC's *Vaccine Storage and Handling Toolkit* (www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf).

ERROR: Inadvertently leaving the refrigerator or freezer door open or having inadequate seals

- Unfortunately, too much vaccine is lost every year because storage unit doors were left open. Remind staff to *completely* close the door every time they open the refrigerator or freezer.
- Check the seals on the doors on a regular schedule, such as when you're taking inventory. If there is any indication the door seal may be cracked or not sealing properly, have it replaced. (This is much less costly than replacing a box of pneumococcal conjugate or varicella vaccine!)

CONTINUED ON THE NEXT PAGE ▶

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www.immunize.org/catg.d/p3036.pdf ▪ Item #P3036 (8/18)

ERROR: Storing food and drinks in the vaccine refrigerator

- Frequent opening of the refrigerator door to retrieve food items can adversely affect the internal temperature of the unit and damage vaccines. Store only vaccines in the designated units.

ERROR: Inadvertently cutting the power supply to the storage units

- Be sure everyone in your office, including the janitorial staff, understands that very expensive and fragile vaccines are being stored in the refrigerator and freezer.
- Post a *Do Not Unplug* sign (www.immunize.org/catg.d/p2090.pdf) next to electrical outlets for the refrigerator and freezer, and a *Do Not Stop Power* warning label (www.immunize.org/catg.d/p2091.pdf) by the circuit breaker for the electrical outlets.

ERROR: Recording temperatures an insufficient number of times each day

- If using a temperature monitoring device (TMD) (digital data loggers [DDL] preferred and required for VFC vaccine storage) that records min/max temperatures, document min/max and current temperatures *once* each workday, preferably in the morning. If using a TMD that does not record min/max temperatures, document current temperatures *twice,* at the beginning and end of each workday.
- Record the temperatures you observed on an appropriate log. IAC has temperature logs (www.immunize.org/handouts/temperature-logs.asp) available in both Fahrenheit and Celsius formats.
- Record temperatures for ALL units being used to store vaccine. Don't forget to check temperatures for both the refrigerator and freezer.

ERROR: Documenting out-of-range temperatures on vaccine temperature logs but not taking action

- If you find out-of-range temperatures…do something! The viability of your vaccine – and the protection of your patients – is at stake.
- Guidance on what to do may be found on IAC's temperature logs (www.immunize.org/handouts/temperature-logs.asp) and Vaccine Storage Troubleshooting Record (www.immunize.org/catg.d/p3041.pdf).
- Have an Emergency Response Plan and trained staff in place before a problem occurs. For help in developing a plan, see the Checklist of Resources for the Emergency Vaccine Retrieval and Storage Plan in CDC's Vaccine Storage and Handling Toolkit (www.cdc.gov/vaccines/hcp/admin/storage/toolkit/storage-handling-toolkit.pdf).

ERROR: Discarding temperature logs too soon

Keep your temperature logs for at least 3 years. Why?

- You can track recurring problems as the storage unit ages.
- If out-of-range temperatures have been documented, you can determine how long and how often this has been occurring.
- This can be a great way to demonstrate why you need a new refrigerator or freezer!

ERROR: Not using vaccine with the soonest expiration date first

When unloading a new shipment of vaccine:

- Move vaccine with the shortest expiration date to the front of the unit, making it easier for staff to access this vaccine first.
- Mark the "older" vaccine to be used first.

ERROR: Dealing inappropriately with expired vaccines

- Carefully monitor your usage to ensure viable vaccines don't expire! As discussed above, place vaccines with the shortest expiration dates at the front of the unit.
- If you discover expired vaccines, immediately remove them from the unit so that they are not inadvertently administered.

ERROR: Discarding multidose vials prematurely

- Almost all multidose vials of vaccines contain a preservative and can be used until the expiration date on the vial, unless there is actual contamination or the vials are not stored under appropriate conditions. However, multidose vials of reconstituted vaccine (e.g., meningococcal polysaccharide and yellow fever) must be used within a defined period after reconstitution. Refer to the package inserts for information.
- The Joint Commission has clarified that vaccines are an exception to its usual "28-day rule" for use of medications in multidose vials. Providers are directed to follow guidance from CDC and vaccine manufacturers.

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AAP Immunization Resources
Storage and Handling Series
Refrigerators, Freezers, and Vaccine Storage

The Centers for Disease Control and Prevention (CDC) offers guidance on proper storage and handling of vaccines, including recommendations on storage units for vaccines, in the Vaccine Storage and Handling Toolkit.

The American Academy of Pediatrics (AAP) has assembled some tips to help you choose the best equipment to meet the needs of your practice and keep your vaccine stock safe.

NEVER FREEZE REFRIGERATED-VACCINE

Silently freezing vaccine is the biggest threat to the potency and efficacy of your refrigerated-vaccine. It is impossible to visually detect whether a vaccine has been frozen. If such a vaccine is given to children, it may not prevent disease. Take precautions against freezing your vaccine by using the recommended equipment and properly setting up your refrigerator. For visuals of how to do this see the CDC Vaccine Storage and Handling Toolkit and the EZIZ Preparing Refrigerators for Vaccine Storage.

Key Points:

- Stand-alone refrigerator and freezer units are safest for storing vaccines.
- Medical- or pharmacy- grade refrigerators have electronic thermostats, audible door-ajar alarms, wire shelves, interior fans and ports to pass through sensor wires.
- Freezers are much smaller and can be manual or auto-defrost. They can have simpler analog thermostats, but should have a port for sensor wires. If picking a manual defrost unit, there should be a spare or second unit in the same office capable of holding the frozen vaccine while the defrost is completed.

CDC recommendations for stand-alone refrigerators and freezers

CDC strongly recommends replacing old, combination (domestic) units with stand-alone refrigerator and freezer units. Dual pharmacy-grade units with independent refrigerator and freezer compressors (not combo domestic units sharing a single compressor) are also excellent in offices where space is limited. Refrigerator/Freezer units can vary in size, from a compact, under-the-counter style to large, double-door units. The use of standard domestic combination refrigerator/freezer units is no longer appropriate, and many VFC programs may require their immediate replacement. The use of dormitory or bar-style refrigerator/freezers (small refrigerator units with interior freezer sections) has been banned for several years due to freezing vaccine risks.

CDC recommendations for stand-alone refrigerators and freezers (continued)

The characteristics of an appropriate **refrigerator storage system** include:

- ability to maintain within +/- 2°C of 5°C despite fluctuating ambient temperatures
- vaccine storage areas do not exceed the +2°C to +8°C +36°F to 46°F temperature range
- electronic / digital thermostat preset to 5°C (or possibly 4°C)
- wire shelves with good interior circulation to minimize internal temperature variance to +/- 2°C
- door ajar audible alarm and temperature excursion alarm
- enough extra room to hold the practice's vaccine stock, including flu vaccine at least 4 inches from the unit's walls
- certified continuous data logger with max/min displaying thermometer accurate to +/-0.5°C +/-1°F

The characteristics of an appropriate **freezer storage system** includes:

- ability to store frozen vaccine not warmer than -15°C +5°F
- nor colder than -50°C -58°F
- room to store the year's largest inventory of Varivax, ProQuad and MMR II
- certified data logging max/min displaying thermometer accurate to +/-0.5°C
- automatic defrost or ability to defrost manually (practices using a freezer that needs to be defrosted manually will need a second freezer in which to store vaccine during the defrost process)

Half-liter drinking water bottles can be added to vaccine refrigerators to increase cold mass and thus stabilize temperature swings. Always cool water bottles in an alternate refrigeration unit before placing in a vaccine refrigerator. Chilled water bottles may be placed in empty shelves or the floor, but do not allow them to obstruct the air flow by touching the rear wall, nor should vaccines block the cover of the unit motor compartment. Typically, the air flow is down the rear walls from the circulating fan in the top and then back up the front.

Frozen water bottles may be placed in freezers to add cold mass. To help freezers retain their temperature longer in power outages, a phase change material -23°C -9°F capable of passively maintaining temperatures below -15°C +5°F is needed.

Types of refrigerator & freezers

Biologic-grade Full-sized Refrigerators

Biologic-grade ("medical"; "purpose-built"; "vaccine"; "blood-bank"; "laboratory") refrigerators are considered the best, most secure option for vaccine storage. These are the "gold-standard" in vaccine units and have electronic thermostats, wire shelving to improve circulation, small ports for the entry of a temperature probe wire and interior fans to equalize the temperature throughout. Manufacturers in this category offer a range of sizes and options to fit any clinic's needs. Size options include one-door and two-door bulk storage units, under-counter units and small point of service units to replace the disallowed dorm units. Units with glass doors help with inventory management. Keep in mind, biologic-grade units often require over a month to deliver. Some manufacturers will sell refrigerators classified as "biologic grade" with a mechanical or analog thermostat – avoid these. If purchasing a vaccine grade refrigerator, it should always have a "microprocessor controlled" or "electronic / digital" thermostat. These units are designed to run at approximately 5°C 41°F and rarely need any adjustment by the end-user. They are much safer than refrigerator units with analog dials.

Biologic-grade Freezers and Domestic Freezers

Freezers are easier to construct since they do not need a precise range – they just need to be always colder than -15°C +5°F. Freezers can be much smaller than what is normally used in a home. Although frost-free freezers are recommended, that feature is often found only in freezers much larger than what is generally needed. (Large practices with <5 providers might consider a large 5+ cu ft freezer.) If not specially designed, freezers advertised as "frost-free" may warm up considerably above -15°C +5°F during defrost when the evaporator coils are heated to melt any frost or ice. Often it is less expensive to purchase two small manual defrost units and keep one as a "cold spare", than to purchase an appropriate auto-defrost unit. (The cold spare unit could hold the vaccine while the primary unit is being manually defrosted.) Be careful not to purchase more freezer than you need – vaccines containing Varivax are the only pediatric vaccines that require frozen storage, although MMR can be optionally stored frozen. Adequate freezers for 3 or 4 pediatricians can be as small as 1.5 cubic feet and cost as little as $250. If ordering a unit for under the counter, check the height of your countertop before ordering. Standard countertops are 36" high and may not be able to accommodate all freezers.

Remember, small refrigerators and freezers can be sold as “counter top” or “built-in”. That refers to the air circulation needed for cooling. “Built-ins” are able to exhaust waste heat out of the front of the unit.

Standard Refrigerators and Freezers and “Commercial Grade”

Standard domestic refrigerators and freezers are found in homes and appliance stores. Higher-end models are sometimes referred to as “commercial-grade,” are most often used in the food service industry. They are not “biologic-grade”. Currently, use of domestic refrigerator-only and freezer-only units is not prohibited, but future guidance may disallow them, as many VFC programs have done. Commercial food service refrigerators look very much like vaccine refrigerators, but there can be differences. Food service units are designed to rapidly cool large quantities of warm/hot food – and thus could get too cold (below 0°C 32°F) when the compressor turns on. In an emergency, it is possible for a domestic refrigerator-only unit to be used safely for vaccine storage with proper precautions. If used for VFC vaccine, you should consult with your local VFC.

Other Features and Alarms

Glass doors may help the practice with inventory control, but they lose heat much faster in a power outage. While a solid door unit may maintain an acceptable temperature for 2 hours without power, glass door units rarely go longer than 30 minutes. Having generator power is prudent if looking for a glass door unit.

Certified, continuous data-logging thermometers with a maximum and minimum display are required. Read more about these. It is also important to purchase a temperature monitor that can call, text, or otherwise notify several people if the unit has a temperature excursion. Best are those that will keep calling/notifying a list of staff until one acknowledges the notification with a response. Active notification could prevent nearly 80% of vaccine wastage due to temperature excursions.

The refrigerator may come with an electronic digital display of temperature, but the VFC program will require a separate certified data logger in a glycol buffer.

Manufacturers and Distributers of Biologic-grade Units

The manufacturers and distributors below are a sample of some that you may wish to consider for safe vaccine storage in your practice. Please note that the American Academy of Pediatrics cannot endorse or recommend specific products or brands. If you are a manufacturer of equipment and wish to add or edit information below, please contact immunize@aap.org.

Refrigerators:

Aegis	http://www.aegisfridge.com
American Biotech Supply	http://americanbiotechsupply.com/find-a-dealer
Follett	https://www.follettice.com/healthcare
Helmer	http://www.helmerinc.com/
Lab Research Products	http://www.labresprod.com/
Migali Scientific Refrigeration	http://migaliscientific.com/
Panasonic Healthcare	http://www.panasonic-healthcare.com/us/biomedical
Powers Scientific	www.powersscientific.com
ThermoFisher Scientific	https://www.thermofisher.com/us/en/home/life-science/lab-equipment/cold-storage/vaccine-cold-storage-solutions.html

Specialty Units:

AccuVax Vaccine Management System	Accuvax.com
MiniBarRx	http://minibarrx.com/

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Storage and Handling Series
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Use the following to determine the appropriate equipment size for your practice

Refrigerator:

Offices generally have either one large central storage unit, or a bulk storage unit with smaller refrigerators at a nursing desk that maintains a few days-worth of supply. The advantage of the central-storage style is that there is just one unit to be inventoried, set up, and monitored. Disadvantages include crowding by staff when multiple vaccine administrators need to retrieve vaccines, and inefficiency of the vaccine administrator needing to leave the area to retrieve the vaccine. In a bulk-storage style, a very large unit could be placed out of the high-flow area and infrequently accessed. The vaccine administrator would pull mainly from a smaller unit near their vaccine preparation area and not need to walk to the central unit. The disadvantage is that there are more units to monitor and larger initial cost.

Sizing a unit is difficult. Consider getting something larger than what exists currently. If just starting out, consider visiting a practice of the size you hope to be and look at their vaccine storage units. Vaccines come in many varied and oddly shaped boxes, so just counting expected dosages is rarely helpful. Remember to factor in the space needed for FluMist and injectable Flu vaccine.

Freezer:

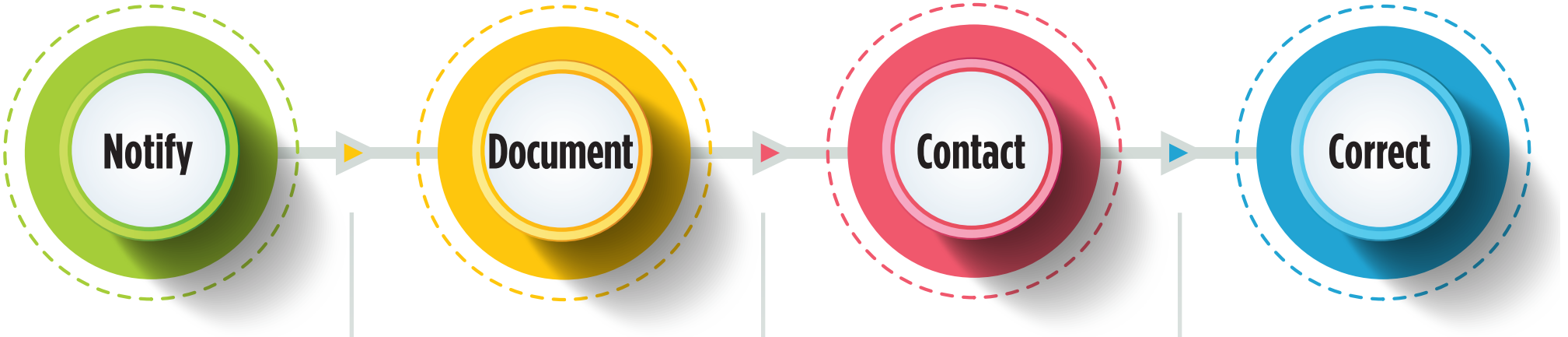
Freezers can be much smaller. Since only Varivax containing vaccine must be stored in it, a 1.5 cu ft unit can hold enough vaccine for 3 or 4 pediatricians. Generally it works best to have a second cold spare unit so units can be manually defrosted. If you have a cold spare and you get tight for room, the second unit, if set up with its own certified thermometer, can serve as an over-flow unit as well. MMR can be stored frozen and most pediatricians store it in the freezer. Since only two visits (12m and 4y) require Varivax and MMR, the freezer can be placed in a less busy area of the office. Again, in selecting a size, base your needs on your current storage ability or visit another practice to see what works for them.

Special thanks to the Oregon Immunization Program for sharing material from their 2012 Refrigerator Guide and to the California Department of Public Health for sharing material from their Refrigerator Buying Guide!

One final suggestion: When ordering large refrigerators, measure all doors and entry ways and check unit dimensions to verify that the unit(s) you ordered can fit into your building and into the appropriate room. Have two different people measure at least twice. These units are often used in university labs and hospitals and are quite large and tall. When ordering, ask for and pay extra for “inside delivery”. Otherwise, the shipping company (which is not who sold you the unit) may leave your new 500 pound refrigerator crated in a box in the parking lot.

Handling a Temperature Excursion in Your Vaccine Storage Unit

Any temperature reading outside ranges recommended in the manufacturers' package inserts is considered a temperature excursion. Identify temperature excursions quickly and take immediate action to correct them. This can prevent vaccine waste and the potential need to revaccinate patients.



Notify

» Notify the primary or alternate vaccine coordinator immediately or report the problem to a supervisor.

» Notify staff by labeling exposed vaccines, "DO NOT USE," and placing them in a separate container apart from other vaccines in the storage unit. Do not discard these vaccines.

Document

» Document details of the temperature excursion:

- Date and time
- Storage unit temperature (including minimum/maximum temperatures during the time of the event, if available)
- Room temperature, if available
- Name of the person completing the report
- General description of the event (i.e., what happened)
- If using a digital data logger (DDL), determine the length of time vaccine may have been affected
- Inventory of affected vaccines
- List of items in the unit other than vaccines (including water bottles)
- Any problems with the storage unit and/or affected vaccines before the event
- Other relevant information

Contact

» Contact your immunization program and/or vaccine manufacturer(s) for guidance per your standard operating procedures (SOPs).

» Be prepared to provide the manufacturer or immunization program with documentation and DDL data so they can offer you the best guidance.

Contact manufacturer for excursions:	
Merck	1-800-672-6372
Sanofi Pasteur	1-800-822-2463
GlaxoSmithKline	1-888-825-5249
Pfizer	1-800-438-1985
Seqirus	1-855- 358-8966

Correct

» If the temperature alarm goes off repeatedly, do not disconnect the alarm until you have determined and addressed the cause.

» Check the basics, including:

- Power supply
- Unit door(s)
- Thermostat settings

» If the excursion was the result of a temperature fluctuation, refer to the chapter, "Vaccine Storage and Temperature Monitoring Equipment," in CDC's *Vaccine Storage and Handling Toolkit* for detailed guidance on adjusting storage unit temperature to the appropriate range.

» If you believe the storage unit has failed, implement your emergency vaccine SOPs. Never allow vaccines to remain in a nonfunctioning unit.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

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CS249275-BG

Vaccine Storage Troubleshooting Record (check) ☐ Refrigerator ☐ Freezer

Indiana Department of Health

Use this form to document any unacceptable vaccine storage event, such as exposure of refrigerated vaccines to temperatures that are outside the manufacturers' recommended storage ranges. Send this form to your IDOH Ordering and Accountability Specialist.

Date & Time of Event If multiple, related events occurred, see Description of Event below.	**Storage Unit Temperature** at the time the problem was discovered		**Room Temperature** at the time the problem was discovered	**Person Completing Report**	
Date:	Temp when discovered:		Temp when discovered:	Name:	
Time:	Minimum temp:	Maximum temp:	Comment (optional):	Title:	Date:

Description of Event *(If multiple, related events occurred, list each date, time, and length of time out of storage.)*

- General description (i.e., what happened?)
- Estimated length of time between event and last documented reading of storage temperature in acceptable range (2° to 8°C [36° to 46°F] for refrigerator; -50° to -15°C [-58° to 5°F] for freezer)
- Inventory of affected vaccines, including (1) lot #s and (2) whether purchased with public (for example, VFC) or private funds (Use separate sheet if needed, but maintain the inventory with this troubleshooting record.)
- At the time of the event, what else was in the storage unit? For example, were there water bottles in the refrigerator and/or frozen coolant packs in the freezer?
- Prior to this event, have there been any storage problems with this unit and/or with the affected vaccine?
- Include any other information you feel might be relevant to understanding the event.

Action Taken *(Document thoroughly. This information is critical to determining whether the vaccine might still be viable!)*

- When were the affected vaccines placed in proper storage conditions? (Note: Do not discard the vaccine. Store exposed vaccine in proper conditions and label it "do not use" until after the manufacturers determine viability and you can obtain a case number).
- Who was contacted regarding the incident? (For example, supervisor, state/local health department, manufacturer—list all.)
- IMPORTANT: What steps did you take to prevent a similar issue from happening in the future?

Results

- What happened to the vaccine? Did the manufacturers tell you to use or waste the vaccine? Please record the Case Number here. Send this form to your Ordering and Accountability Specialist.

Case #:

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Guide to Contraindications and Precautions to Commonly Used Vaccines[1,*]

Vaccine	Contraindications	Precautions
Hepatitis B (HepB)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Hypersensitivity to yeast	• Moderate or severe acute illness with or without fever • Infant weighing less than 2000 grams (4 lbs, 6.4 oz)[2]
Rotavirus (RV5 [RotaTeq], RV1 [Rotarix])	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Severe combined immunodeficiency (SCID) • History of intussusception	• Moderate or severe acute illness with or without fever • Altered immunocompetence other than SCID • Chronic gastrointestinal disease[3] • Spina bifida or bladder exstrophy[3]
Diphtheria, tetanus, pertussis (DTaP) **Tetanus, diphtheria, pertussis (Tdap)** **Tetanus, diphtheria (DT, Td)**	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • For pertussis-containing vaccines: Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures) not attributable to another identifiable cause within 7 days of administration of a previous dose of DTP or DTaP (for DTaP); or of previous dose of DTP, DTaP, or Tdap (for Tdap)	• Moderate or severe acute illness with or without fever • Guillain-Barré syndrome (GBS) within 6 weeks after a previous dose of tetanus toxoid-containing vaccine • History of Arthus-type hypersensitivity reactions after a previous dose of diphtheria- or tetanus-toxoid-containing vaccine; defer vaccination until at least 10 years have elapsed since the last tetanus-toxoid containing vaccine • For DTaP and Tdap only: Progressive or unstable neurologic disorder (including infantile spasms for DTaP), uncontrolled seizures, or progressive encephalopathy; defer until a treatment regimen has been established and the condition has stabilized
***Haemophilus influenzae* type b (Hib)**	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Age younger than 6 weeks	• Moderate or severe acute illness with or without fever
Inactivated poliovirus vaccine (IPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever • Pregnancy
Hepatitis A (HepA)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever
Measles, mumps, rubella (MMR)[4]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Severe immunodeficiency (e.g., hematologic and solid tumors, chemotherapy, congenital immunodeficiency or long-term immunosuppressive therapy[5]), or persons with human immunodeficiency virus [HIV] infection who are severely immunocompromised[6] • Family history of congenital or hereditary immunodeficiency in first-degree relatives (e.g., parents and siblings), unless the immune competence of the potential vaccine recipient has been substantiated clinically or verified by a laboratory test • Pregnancy	• Moderate or severe acute illness with or without fever • Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product)[7] • For MMRV only: Family history of seizures • History of thrombocytopenia or thrombocytopenic purpura • Need for tuberculin skin testing[8]
Varicella (Var)[4]	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component • Severe immunodeficiency (e.g., hematologic and solid tumors, chemotherapy, congenital immunodeficiency or long-term immunosuppressive therapy[5]), or persons with HIV infection who are severely immunocompromised[6] • Family history of congenital or hereditary immunodeficiency in first-degree relatives (e.g., parents and siblings), unless the immune competence of the potential vaccine recipient has been substantiated clinically or verified by a laboratory test • Pregnancy	• Moderate or severe acute illness with or without fever • Recent (within 11 months) receipt of antibody-containing blood product (specific interval depends on product)[7] • Receipt of specific antivirals (i.e., acyclovir, famciclovir, or valacyclovir) 24 hours before vaccination; avoid use of these antiviral drugs for 14 days after vaccination.

CONTINUED ON THE NEXT PAGE ▶

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www.immunize.org/catg.d/p3072a.pdf • Item #P3072a (9/18)

Vaccine	Contraindications	Precautions
Pneumococcal (PCV13 or PPSV23)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component (including, for PCV13, to any diphtheria toxoid-containing vaccine)	• Moderate or severe acute illness with or without fever
Influenza, inactivated injectable (IIV)[9]	• Severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine (except egg) or to a previous dose of influenza vaccine[9]	• Moderate or severe acute illness with or without fever • History of GBS within 6 weeks of previous influenza vaccination • Egg allergy other than hives (e.g., angioedema, respiratory distress, lightheadedness, or recurrent emesis); or required epinephrine or another emergency medical intervention (IIV may be administered in an inpatient or outpatient medical setting, under the supervision of a healthcare provider who is able to recognize and manage severe allergic conditions)[9]
Influenza, recombinant (RIV)[9]	• Severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine (except egg) or to a previous dose of influenza vaccine[9]	• Moderate or severe acute illness with or without fever • History of GBS within 6 weeks of previous influenza vaccination
Influenza, live attenuated (LAIV)[2,3]	• Severe allergic reaction (e.g., anaphylaxis) to any component of the vaccine (except egg) or to a previous dose of influenza vaccine • Concomitant use of aspirin or salicylate-containing therapy in children or adolescents • Children age 2 through 4 years who have a diagnosis of asthma or had wheezing with the past 12 months, per healthcare provider statement • Children and adults who are immunocompromised due to any cause (including immunosuppression caused by medications or by HIV infection) • Close contacts and caregivers of severely immunosuppressed persons who required a protected environment) • Pregnancy • Receipt of influenza antivirals (amantadine, rimantadine, zanamivir, oseltamivir or peramivir) within the previous 48 hours; avoid use of these antiviral drugs for 14 days after vaccination	• Moderate or severe acute illness with or without fever • GBS within 6 weeks of previous influenza vaccination • Asthma in persons age 5 years and older • Other chronic medical conditions (e.g., other chronic lung diseases, chronic cardiovascular disease [excluding isolated hypertension], diabetes, chronic renal or hepatic disease, hematologic disease, neurologic disease, and metabolic disorders)
Human papillomavirus (HPV)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever • Pregnancy
Meningococcal (MenACWY; MenB)	• Severe allergic reaction (e.g., anaphylaxis) after a previous dose or to a vaccine component	• Moderate or severe acute illness with or without fever

FOOTNOTES

1. The Advisory Committee on Immunization Practices (ACIP) recommendations and package inserts for vaccines provide information on contraindications and precautions related to vaccines. Contraindications are conditions that increase chances of a serious adverse reaction in vaccine recipients and the vaccine should not be administered when a contraindication is present. Precautions should be reviewed for potential risks and benefits for vaccine recipient. For a person with a severe allergy to latex (e.g., anaphylaxis), vaccines supplied in vials or syringes that contain natural rubber latex should not be administered unless the benefit of vaccination clearly outweighs the risk for a potential allergic reaction. For latex allergies other than anaphylaxis, vaccines supplied in vials or syringes that contain dry, natural rubber or natural rubber latex may be administered. Whether and when to administer DTaP to children with proven or suspected underlying neurologic disorders should be decided on a case-by-case basis.
2. Hepatitis B vaccination should be deferred for preterm infants and infants weighing less than 2000 g if the mother is documented to be hepatitis B surface antigen (HBsAg)-negative at the time of the infant's birth. Vaccination can commence at chronological age 1 month or at hospital discharge. For infants born to women who are HBsAg-positive, hepatitis B immunoglobulin and hepatitis B vaccine should be administered within 12 hours of birth, regardless of weight.
3. For details, see CDC. "Prevention of Rotavirus Gastroenteritis among Infants and Children: Recommendations of the Advisory Committee on Immunization Practices. (ACIP)" *MMWR* 2009; 58(No. RR–2), available at www.cdc.gov/vaccines/hcp/acip-recs/index.html.
4. Age-appropriate parenteral vaccines (LAIV, MMR, Var, or ZVL) can be administered on the same day. If not administered on the same day, these live vaccines should be separated by at least 28 days.
5. Immunosuppressive steroid dose is considered to be 2 or more weeks of daily receipt of 20 mg prednisone or equivalent. Vaccination should be deferred for at least 1 month after discontinuation of such therapy. Providers should consult ACIP recommendations for complete information on the use of specific live vaccines among persons on immune-suppressing medications or with immune suppression because of other reasons.
6. HIV-infected children 5 years of age or younger should receive measles vaccine if CDT+ T-lymphocyte percentages are greater than or equal to 15% for greater than or equal to 6 months. HIV-infected children older than 5 years must have CD4+ percentages greater than or equal to 15 and CD4+ T-lymphocyte counts greater than or equal to 200 lymphocytes/cubic mm for 6 months or longer. In cases where only counts or only percentages are available for children older than 5 years, use the data that are available. In cases where percentages are not available for children 5 years of younger, use counts based on the age-specific counts at the time the counts were measured (see www.cdc.gov/vaccines/hcp/acip-recs/index.html for details). HIV-infected children younger than 8 years may receive varicella vaccine if CD4+ T-lymphocyte percentages are 15% or greater. HIV-infected children 8 years or older may receive varicella vaccine if CD4+ T-lymphocyte count is greater than 200 cells/cubic mm.
7. Vaccine should be deferred for the appropriate interval if replacement immune globulin products are being administered (see "Table 3-5. Recommended Intervals Between Administration of Antibody-Containing Products and Measles- or Varicella-Containing Vaccine, by Product and Indication for Vaccination" found in "Best Practices Guidance of the Advisory Committee on Immunization Practices (ACIP)," available at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html.)
8. Measles vaccination might suppress tuberculin reactivity temporarily. Measles-containing vaccine may be administered on the same day as tuberculin skin testing, or should be postponed for at least 4 weeks after the vaccination.
9. For additional information on use of influenza vaccines among persons with egg allergy, see CDC. "Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP) – United States, . . ." Access links to influenza vaccine recommendations at www.cdc.gov/vaccines/hcp/acip-recs/vacc-specific/flu.html.

* Adapted from "Table 4-1. Contraindications and Precautions to Commonly Used Vaccines" found in: CDC. "Best Practices Guidance of the Advisory Committee on Immunization Practices (ACIP)" available at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html.

Indiana State Department of Health Children and Hoosiers Immunization Registry Program - Quick Reference Guide

Adding Adverse Reactions and Special Considerations

Why Add Adverse Reactions and Special Considerations in CHIRP?

Accurate and complete documentation of vaccinations, adverse reactions, and special considerations (contraindications, exemptions, and precautions) assists providers in making fully informed decisions about vaccines to recommend for their patients.

How Can I View Adverse Reactions on a Patient's Record?

An adverse reaction is an unusual event occurring after a vaccination that might be caused by the vaccine product or vaccination process. If an adverse reaction is documented for a patient in CHIRP, a **#** sign will show next to the vaccination date.

To View Adverse Reaction Information:

1. Log in to the **CHIRP**
2. **Search** for a patient
3. Click on **Vaccinations** in the left menu, then click **View/Add**
4. Look for any vaccines with **#** following the **vaccination date**

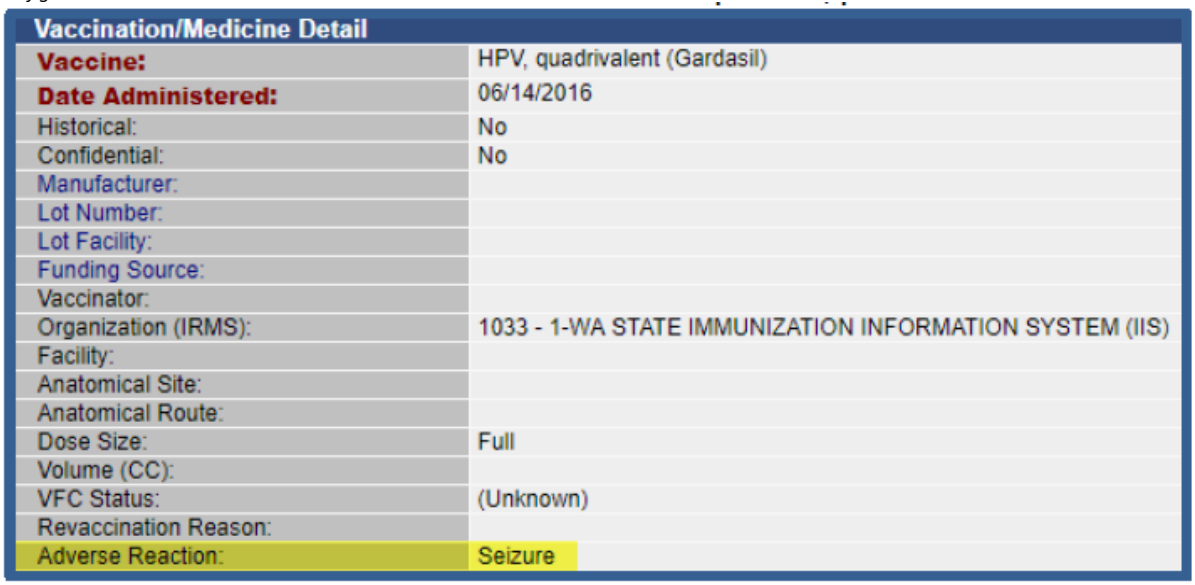
Vaccine	1
HPV, quadrivalent (Gardasil)	06/14/2016 #

5. **Viewing the details** of adverse reaction (see ***figure 1*** on the next page):
   - ✓ If **your organization documented** the reaction, you can **view the details by clicking on the vaccination date**
   - ✓ If your **organization did not document** the reaction, you will need **to contact the clinic** that entered it or ask the patient/parent for more information

How Can I Add an Adverse Reaction to a Patient's Record?

1. Follow steps 1-3 above to navigate to the **Vaccination View/Add** screen
2. When the **Vaccination View/Add** screen loads, you will see the patient name at the top followed by a list of vaccinations and data entry boxes

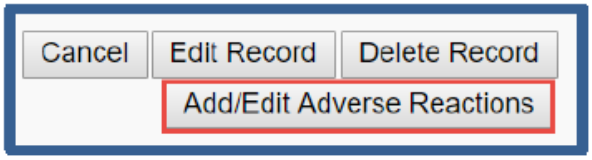
figure 1.



Vaccination/Medicine Detail	
Vaccine:	HPV, quadrivalent (Gardasil)
Date Administered:	06/14/2016
Historical:	No
Confidential:	No
Manufacturer:	
Lot Number:	
Lot Facility:	
Funding Source:	
Vaccinator:	
Organization (IRMS):	1033 - 1-WA STATE IMMUNIZATION INFORMATION SYSTEM (IIS)
Facility:	
Anatomical Site:	
Anatomical Route:	
Dose Size:	Full
Volume (CC):	
VFC Status:	(Unknown)
Revaccination Reason:	
Adverse Reaction:	Seizure

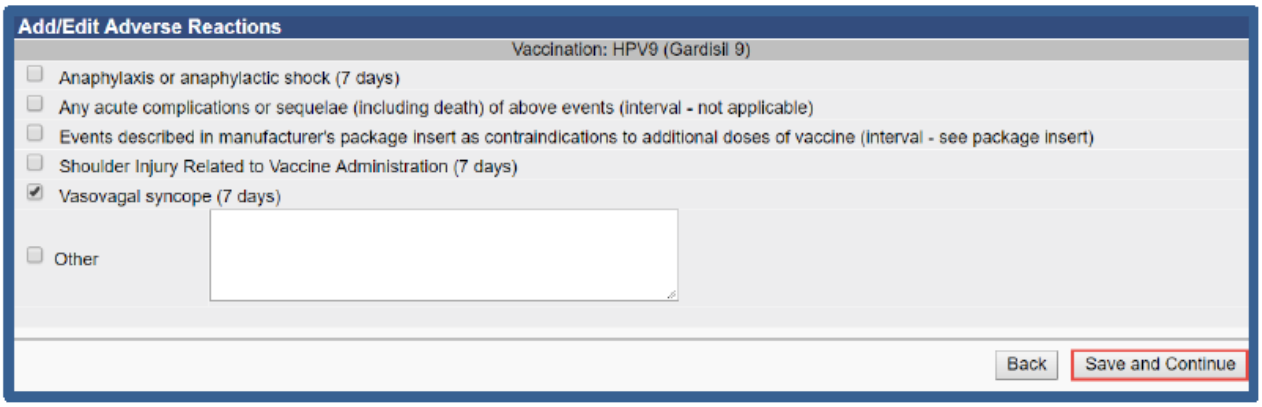
3. Locate the vaccination that resulted in an adverse reaction. Click on the vaccination date to open the **Vaccination Detail** screen.

4. Select the **Add/Edit Adverse Reaction** button at the bottom right of the screen.



5. In the **Add/Edit Adverse Reactions** screen, enter the reaction that occurred. If the reaction is not listed, enter the reaction in the **Other** text field.

6. Click the **Save and Continue** button.



7. Information about reporting to the federal Vaccine Adverse Events Reporting System (VAERS) including a link to the VAERS website will appear at the top of the screen along with a message saying "**Your changes have been saved**."

8. Click the **Cancel** button to return to the **Vaccination View/Add** screen.

9. This screen will be updated with a **#** sign next to the vaccination date.

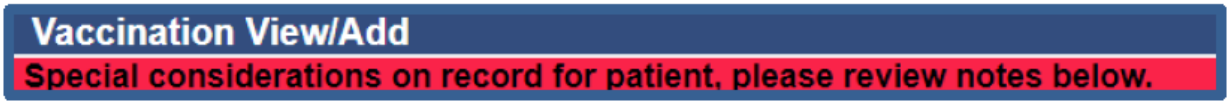
How Can I View Special Considerations in a Patient's Vaccination Record?

Special Considerations include *contraindications, exemptions, and precautions*.

- **Contraindications** are reasons a patient should not or does not need to receive a vaccine, like a severe allergic reaction to vaccine. This also includes history of immunity/laboratory evidence of immunity.
- **Exemptions** are reasons a patient refused to receive a vaccine, such as for religious or personal/philosophical reasons.
- **Precautions** are reasons a healthcare provider may decide to delay vaccination, such as moderate or severe acute illness or the receipt of certain medications.

Note: An exemption displayed in this section is NOT sufficient documentation for a school or child care immunization exemption; a completed Certificate of Exemption is required.

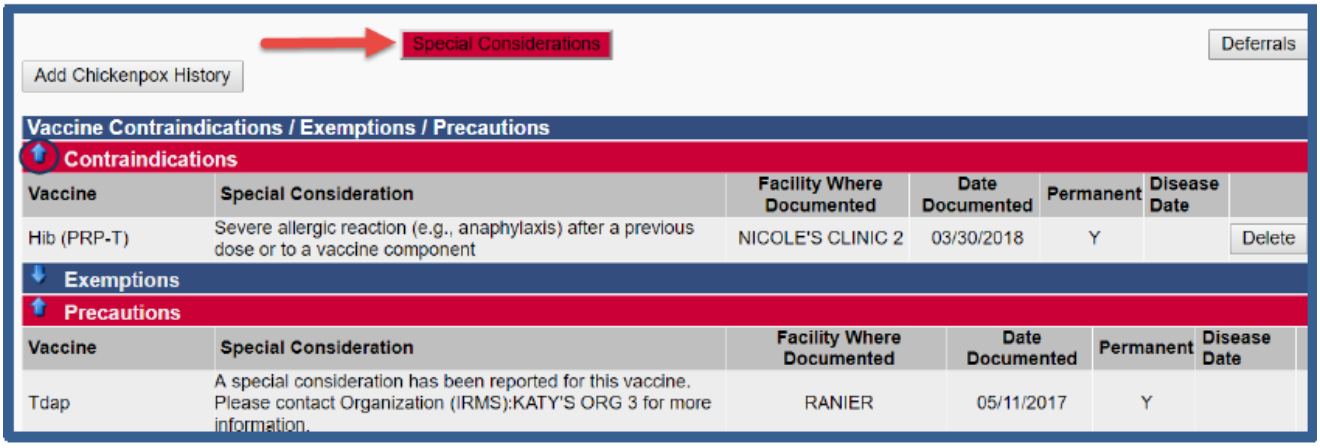
A message highlighted in red appears at the top of the **Vaccination View/Add** screen for all patients with a documented special consideration.



To View Special Considerations:

1. Navigate to the **Vaccination View/Add** screen for your patient.
2. Scroll down the screen until you see the **Vaccine Contraindications/Exemptions/ Precautions** section.
3. Click on the blue down arrow to the left of the **Contraindications, Exemptions,** or **Precautions** heading to expand a section and view more details.
    - The patient record shown below has documented **Contraindications**, indicated by the red **Contraindications** bar. The blue up arrow to the left of the **Contraindications** heading indicates this section is expanded.
    - The patient shown below has no documented exemptions, so the **Exemptions** bar is blue, instead of red. The down arrow to the left of the **Exemptions** heading indicates this section is collapsed.
    - The patient record shown below has a **Precaution** documented by another provider, so the details you can view are limited (see ***figure 2*** on next page).
    - If the patient does not have any Special Considerations documented, the fields will be blank and the **Special Considerations** button will show a grey background.

figure 2.



Tips: 1) Special considerations must be documented by vaccine type **2)** Temporary or permanent Contraindications will remove the vaccine from the patient's forecast **3)** If your clinic did NOT add the special considerations, you will not be able to see the details and should contact CHIRP for the other clinic's contact information

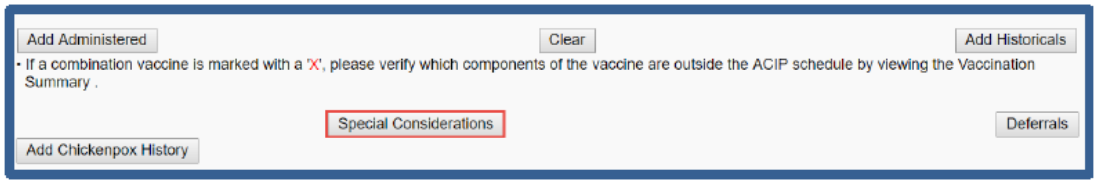
How Can I Add or Delete Special Considerations in A Patient's Vaccination Record?

You can document prior history of chickenpox and medical contraindications such as severe allergic reaction to a vaccine through the **Vaccinations View/Add** screen. If a patient has a severe allergic reaction to a vaccination, this should be documented as a contraindication and as an adverse reaction.

Note: Special considerations may only be edited or deleted by the facility that entered them

1. Start by logging in, looking up the patient, and pulling up the **Vaccinations View/Add** screen.

2. Click on the **Special Considerations** button listed toward the bottom of the screen.



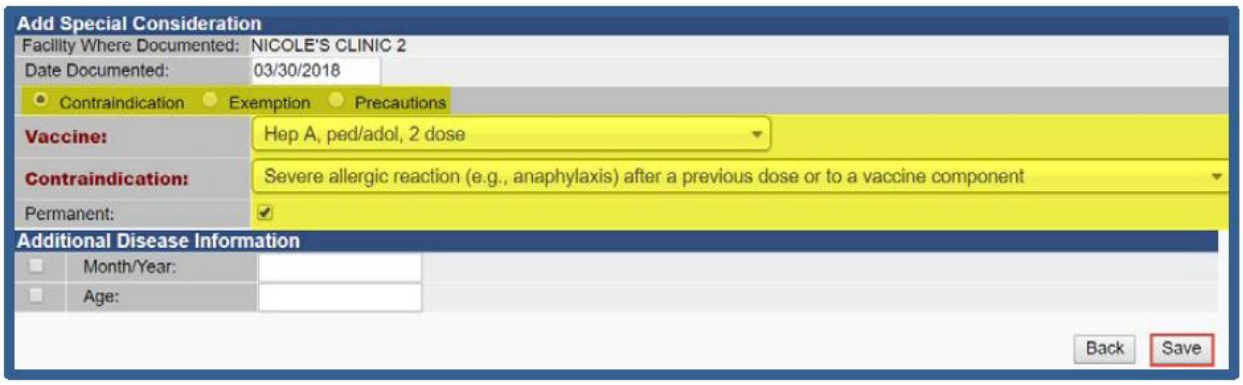
3. Enter the facility (if not already filled in) and select the **Contraindication, Exemption, or Precaution** radio button.

4. Select a **Vaccine** first, then select the **Contraindication, Exemption, or Precaution** reason from the drop down box.

5. Check the **Permanent** box to indicate a permanent contraindication, exemption, or precaution. If this box is unchecked, this indicates a temporary contraindication. a. Contraindications remove the vaccine from the patient's forecast regardless of whether they are documented as permanent or temporary.

    - Precautions only remove the vaccine from the patient's forecast if the **Permanent** box is checked.

6. Click the **Save** button to submit.



7. To delete a special consideration, scroll to the bottom of the **Vaccination View/Add** screen to the **Vaccine Contraindications/Exemptions/Precautions** section and click the **Delete** button at the far right to remove any special considerations documented by your clinic.

Questions? Please Contact the CHIRP Help Desk at 1-888-227-4429 or email chirp@isdh.in.gov

Screening Checklist for Contraindications to Vaccines for Children and Teens

PATIENT NAME _____

DATE OF BIRTH ____ / ____ / ____
month day year

For parents/guardians: The following questions will help us determine which vaccines your child may be given today. If you answer "yes" to any question, it does not necessarily mean your child 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. Is the child sick today?	☐	☐	☐
2. Does the child have allergies to medications, food, a vaccine component, or latex?	☐	☐	☐
3. Has the child had a serious reaction to a vaccine in the past?	☐	☐	☐
4. Does the child have a long-term health problem with lung, heart, kidney or metabolic disease (e.g., diabetes), asthma, a blood disorder, no spleen, complement component deficiency, a cochlear implant, or a spinal fluid leak? Is he/she on long-term aspirin therapy?	☐	☐	☐
5. If the child to be vaccinated is 2 through 4 years of age, has a healthcare provider told you that the child had wheezing or asthma in the past 12 months?	☐	☐	☐
6. If your child is a baby, have you ever been told he or she has had intussusception?	☐	☐	☐
7. Has the child, a sibling, or a parent had a seizure; has the child had brain or other nervous system problems?	☐	☐	☐
8. Does the child have cancer, leukemia, HIV/AIDS, or any other immune system problem?	☐	☐	☐
9. Does the child have a parent, brother, or sister with an immune system problem?	☐	☐	☐
10. In the past 3 months, has the child taken medications that affect the immune system such as prednisone, other steroids, or anticancer drugs; drugs for the treatment of rheumatoid arthritis, Crohn's disease, or psoriasis; or had radiation treatments?	☐	☐	☐
11. In the past year, has the child received a transfusion of blood or blood products, or been given immune (gamma) globulin or an antiviral drug?	☐	☐	☐
12. Is the child/teen pregnant or is there a chance she could become pregnant during the next month?	☐	☐	☐
13. Has the child received 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 to have a personal record of your child's vaccinations. If you don't have one, ask the child's healthcare provider to give you one with all your child's vaccinations on it. Keep it in a safe place and bring it with you every time you seek medical care for your child. Your child will need this document to enter day care or school, for employment, or for international travel.

immunization action coalition
IAC
immunize.org

Saint Paul, Minnesota ▪ 651-647-9009 ▪ www.immunize.org ▪ www.vaccineinformation.org

www.immunize.org/catg.d/p4060.pdf ▪ Item #P4060 (8/19)

Information for Healthcare Professionals about the Screening Checklist for Contraindications to Vaccines (Children and Teens)

Are you interested in knowing why we included a certain question on the screening checklist? If so, read the information below. If you want to find out even more, consult the references in ***Notes*** *below.*

NOTE: For supporting documentation on the answers given below, go to the specific ACIP vaccine recommendation found at the following website: www.cdc.gov/vaccines/hcp/acip-recs/index.html

1. Is the child sick today? *[all vaccines]*

There is no evidence that acute illness reduces vaccine efficacy or increases vaccine adverse events. However, as a precaution with moderate or severe acute illness, all vaccines should be delayed until the illness has improved. Mild illnesses (such as otitis media, upper respiratory infections, and diarrhea) are NOT contraindications to vaccination. Do not withhold vaccination if a person is taking antibiotics.

2. Does the child have allergies to medications, food, a vaccine component, or latex? *[all vaccines]*

An anaphylactic reaction to latex is a contraindication to vaccines that contain latex as a component or as part of the packaging (e.g., vial stoppers, prefilled syringe plungers, prefilled syringe caps). If a person has anaphylaxis after eating gelatin, do not administer vaccines containing gelatin. A local reaction to a prior vaccine dose or vaccine component, including latex, is not a contraindication to a subsequent dose or vaccine containing that component. For information on vaccines supplied in vials or syringes containing latex, see www.cdc.gov/vaccines-pubs/pinkbook/downloads/appendices/B/latex-table.pdf; for an extensive list of vaccine components, see www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/excipient-table-2.pdf. People with egg allergy of any severity can receive any recommended influenza vaccine (i.e., any IIV, RIV, or LAIV) that is otherwise appropriate for the patient's age and health status. For people with a history of severe allergic reaction to egg involving any symptom other than hives (e.g., angioedema, respiratory distress), or who required epinephrine or another emergency medical intervention, the vaccine should be administered in a medical setting, such as a clinic, health department, or physician office. Vaccine administration should be supervised by a healthcare provider who is able to recognize and manage severe allergic conditions.[5]

3. Has the child had a serious reaction to a vaccine in the past? *[all vaccines]*

History of anaphylactic reaction (see question 2) to a previous dose of vaccine or vaccine component is a contraindication for subsequent doses. History of encephalopathy within 7 days following DTP/DTaP is a contraindication for further doses of pertussis-containing vaccine. There are other adverse events that might have occurred following vaccination that constitute contraindications or precautions to future doses. Under normal circumstances, vaccines are deferred when a precaution is present. However, situations may arise when the benefit outweighs the risk (e.g., during a community pertussis outbreak).

4. Does the child have a long-term health problem with lung, heart, kidney, or metabolic disease (e.g., diabetes), asthma, a blood disorder, no spleen, complement component deficiency, a cochlear implant, or a spinal fluid leak? Is he/she on long-term aspirin therapy? *[MMR, MMRV, LAIV, VAR]*

A history of thrombocytopenia or thrombocytopenic purpura is a precaution to MMR and MMRV vaccines. The safety LAIV in children and teens with lung, heart, kidney, or metabolic disease (e.g., diabetes), or a blood disorder has not been established. These conditions, including asthma in children ages 5 years and older, should be considered precautions for the use of LAIV. Children with functional or anatomic asplenia, complement deficiency, cochlear implant, or CSF leak should not receive LAIV. Children on long-term aspirin therapy should not be given LAIV; instead, they should be given IIV. Aspirin use is a precaution to VAR.

5. If the child to be vaccinated is 2 through 4 years of age, has a healthcare provider told you that the child had wheezing or asthma in the past 12 months? *[LAIV]*

Children ages 2 through 4 years who have had a wheezing episode within the past 12 months should not be given LAIV. Instead, these children should be given IIV.

6. If your child is a baby, have you ever been told that he or she has had intussusception? *[Rotavirus]*

Infants who have a history of intussusception (i.e., the telescoping of one portion of the intestine into another) should not be given rotavirus vaccine.

7. Has the child, a sibling, or a parent had a seizure; has the child had brain or other nervous system problem? *[DTaP, Td, Tdap, IIV, LAIV, MMRV]*

DTaP and Tdap are contraindicated in children who have a history of encephalopathy within 7 days following DTP/DTaP. An unstable progressive neurologic problem is a precaution to the use of DTaP and Tdap. For children with stable neurologic disorders (including seizures) unrelated to vaccination, or for children with a family history of seizures, vaccinate as usual (exception: children with a personal or family [i.e., parent or sibling] history of seizures generally should not be vaccinated with MMRV; they should receive separate MMR and VAR vaccines). A history of Guillain-Barré syndrome (GBS) is a consideration with the following: 1) Td/Tdap: if GBS has occurred within 6 weeks of a tetanus-containing vaccine and decision is made to continue vaccination, give Tdap instead of Td if no history of prior Tdap; 2) Influenza vaccine (IIV or LAIV): if GBS has occurred within 6 weeks of a prior influenza vaccination, vaccinate with IIV if at high risk for severe influenza complications.

NOTE: For summary information on contraindications and precautions to vaccines, go to the ACIP's General Best Practice Guidelines for Immunization at www.cdc.gov/vaccines/hcp/acip-recs/general-recs/contraindications.html

8. Does the child have cancer, leukemia, HIV/AIDS, or any other immune system problem? *[LAIV, MMR, MMRV, RV, VAR]*

Live virus vaccines (e.g., MMR, MMRV, VAR, RV, LAIV) are usually contraindicated in immunocompromised children. However, there are exceptions. For example, MMR is recommended for asymptomatic HIV-infected children who do not have evidence of severe immunosuppression. Likewise, VAR should be considered for HIV-infected children age 12 months through 8 years with age-specific CD4+ T-lymphocyte percentage at 15% or greater, or for children age 9 years or older with CD4+ T-lymphocyte counts of greater than or equal to 200 cell/µL. Immunosuppressed children should not receive LAIV. Infants who have been diagnosed with severe combined immunodeficiency (SCID) should not be given a live virus vaccine, including RV. Other forms of immunosuppression are a precaution, not a contraindication, to RV. For details, consult ACIP recommendations (see references in **Notes** above).

9. Does the child have a parent, brother, or sister with an immune system problem? *[MMR, MMRV, VAR]*

MMR, VAR, and MMRV vaccines should not be given to a child or teen with a family history of congenital or hereditary immunodeficiency in first-degree relatives (i.e., parents, siblings) unless the immune competence of the potential vaccine recipient has been clinically substantiated or verified by a laboratory.

10. In the past 3 months, has the child taken medications that affect the immune system such as prednisone, other steroids, or anticancer drugs; drugs for the treatment of rheumatoid arthritis, Crohn's disease, or psoriasis; or had radiation treatments? *[LAIV, MMR, MMRV, VAR]*

Live virus vaccines (e.g., LAIV, MMR, MMRV, VAR) should be postponed until after chemotherapy or long-term high-dose steroid therapy has ended. For details and length of time to postpone, consult the ACIP statement. Some immune mediator and immune modulator drugs (especially the antitumor-necrosis factor agents adalimumab, infliximab, and etanercept) may be immunosuppressive. A comprehensive list of immunosuppressive immune modulators is available in CDC Health Information for International Travel (the "Yellow Book") available at wwwnc.cdc.gov/travel/yellowbook/2018/advising-travelers-with-specific-needs/immunocompromised-travelers. The use of live vaccines should be avoided in persons taking these drugs. To find specific vaccination schedules for stem cell transplant (bone marrow transplant) patients, see General Best Practice Guidelines for Immunization (referenced in **Notes** above). LAIV, when recommended, can be given only to healthy non-pregnant people ages 2 through 49 years.

11. In the past year, has the child received a transfusion of blood or blood products, or been given immune (gamma) globulin or an antiviral drug? *[MMR, MMRV, VAR]*

Certain live virus vaccines (e.g., MMR, MMRV, VAR) may need to be deferred, depending on several variables. Consult the most current ACIP recommendations (referenced in **Notes** above) for the most current information on intervals between antiviral drugs, immune globulin or blood product administration and live virus vaccines.

12. Is the child/teen pregnant or is there a chance she could become pregnant during the next month? *[HPV, IPV, LAIV, MMR, MMRV, VAR]*

Live virus vaccines (e.g., MMR, MMRV, VAR, LAIV) are contraindicated one month before and during pregnancy because of the theoretical risk of virus transmission to the fetus. Sexually active young women who receive a live virus vaccine should be instructed to practice careful contraception for one month following receipt of the vaccine. On theoretical grounds, IPV should not be given during pregnancy; however, it may be given if risk of exposure is imminent (e.g., travel to endemic areas) and immediate protection is needed. IIV and Tdap are both recommended during pregnancy. HPV vaccine is not recommended during pregnancy.

13. Has the child received vaccinations in the past 4 weeks? *[LAIV, MMR, MMRV, VAR, yellow fever]*

Children who were given either LAIV or an injectable live virus vaccine (e.g., MMR, MMRV, VAR, yellow fever) should wait 28 days before receiving another vaccination of this type. Inactivated vaccines may be given at the same time or at any spacing interval.

VACCINE ABBREVIATIONS

LAIV = Live attenuated influenza vaccine
HPV = Human papillomavirus vaccine
IIV = Inactivated influenza vaccine
IPV = Inactivated poliovirus vaccine
MMR = Measles, mumps, and rubella vaccine
MMRV = MMR+VAR vaccine
RIV = Recombinant influenza vaccine
RV = Rotavirus vaccine
Td/Tdap = Tetanus, diphtheria, (acellular pertussis) vaccine
VAR = Varicella vaccine

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

Vaccine	Dose	Route
Diphtheria, Tetanus, Pertussis (DTaP, DT, Tdap, Td)	0.5 mL	IM
***Haemophilus influenzae* type b** (Hib)	0.5 mL	IM
Hepatitis A (HepA)	≤18 yrs: 0.5 mL ≥19 yrs: 1.0 mL	IM
Hepatitis B (HepB) *Persons 11–15 yrs may be given Recombivax HB (Merck) 1.0 mL adult formulation on a 2-dose schedule.*	*Engerix-B; Recombivax HB* ≤19 yrs: 0.5 mL ≥20 yrs: 1.0 mL *Heplisav-B* ≥18 yrs: 0.5 mL	IM
Human papillomavirus (HPV)	0.5 mL	IM
Influenza, live attenuated (LAIV)	0.2 mL (0.1 mL in each nostril)	Intranasal spray
Influenza, inactivated (IIV); for ages 6–35 months	Fluzone: 0.25 mL FluLaval; Fluarix: 0.5 mL	IM
Influenza, inactivated (IIV), for ages 3 years & older; **recombinant** (RIV), for ages 18 years and older	0.5 mL	IM
Measles, Mumps, Rubella (MMR)	0.5 mL	Subcut
Meningococcal serogroups A, C, W, Y (MenACWY)	0.5 mL	IM
Meningococcal serogroup B (MenB)	0.5 mL	IM
Pneumococcal conjugate (PCV)	0.5 mL	IM
Pneumococcal polysaccharide (PPSV)	0.5 mL	IM or Subcut
Polio, inactivated (IPV)	0.5 mL	IM or Subcut
Rotavirus (RV)	Rotarix: 1.0 mL Rotateq: 2.0 mL	Oral
Varicella (Var)	0.5 mL	Subcut
Zoster (Zos)	Shingrix: 0.5* mL	IM
	Zostavax: 0.65 mL	Subcut
Combination Vaccines		
DTaP-HepB-IPV (Pediarix) DTaP-IPV/Hib (Pentacel) DTaP-IPV (Kinrix; Quadracel)	0.5 mL	IM
MMRV (ProQuad)	≤12 yrs: 0.5 mL	Subcut
HepA-HepB (Twinrix)	≥18 yrs: 1.0 mL	IM

* The vial might contain more than 0.5 mL. Do not administer more than 0.5 mL.

Injection Site and Needle Size

Subcutaneous (Subcut) injection

Use a 23–25 gauge needle. Choose the injection site that is appropriate to the person's age and body mass.

AGE	NEEDLE LENGTH	INJECTION SITE
Infants (1–12 mos)	5/8"	Fatty tissue over anterolateral thigh muscle
Children 12 mos or older, adolescents, and adults	5/8"	Fatty tissue over anterolateral thigh muscle or fatty tissue over triceps

Intramuscular (IM) injection

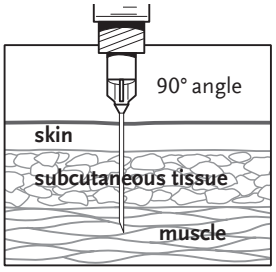
Use a 22–25 gauge needle. Choose the injection site and needle length that is appropriate to the person's age and body mass.

AGE	NEEDLE LENGTH	INJECTION SITE
Newborns (1st 28 days)	5/8"	Anterolateral thigh muscle
Infants (1–12 mos)	1"	Anterolateral thigh muscle
Toddlers (1–2 years)	1–1¼"	Anterolateral thigh muscle
	5/8–1"	Deltoid muscle of arm
Children (3–10 years)	5/8–1"*	Deltoid muscle of arm
	1–1¼"	Anterolateral thigh muscle
Adolescents and teens (11–18 years)	5/8–1"*	Deltoid muscle of arm
	1–1½"	Anterolateral thigh muscle
Adults 19 years or older		
Female or male <130 lbs	5/8–1"*	Deltoid muscle of arm
Female or male 130–152 lbs	1"	Deltoid muscle of arm
Female 153–200 lbs Male 153–260 lbs	1–1½"	Deltoid muscle of arm
Female 200+ lbs Male 260+ lbs	1½"	Deltoid muscle of arm

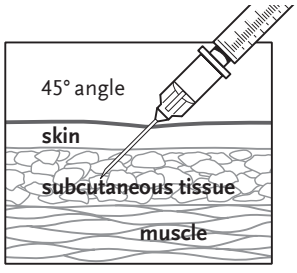
* A 5/8" needle may be used for patients weighing less than 130 lbs (<60 kg) for IM injection in the deltoid muscle **only** if the skin stretched tight, the subcutaneous tissue is not bunched, and the injection is made at a 90-degree angle.

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

Intramuscular (IM) injection



Subcutaneous (Subcut) injection



Intranasal (NAS) administration of Flumist (LAIV) vaccine

Technical content reviewed by the Centers for Disease Control and Prevention

IMMUNIZATION ACTION COALITION Saint Paul, Minnesota • 651-647-9009 • www.immunize.org • www.vaccineinformation.org

www.immunize.org/catg.d/p3085.pdf • Item #P3085 (10/18)

Vaccines with Diluents: How to Use Them

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

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

Vaccine product name	Manufacturer	Lyophilized vaccine (powder)	Liquid diluent (may contain vaccine)	Time allowed between reconstitution and use, as stated in package insert*	Diluent storage environment
ActHIB (Hib)	Sanofi Pasteur	Hib	0.4% sodium chloride	24 hrs	Refrigerator
Hiberix (Hib)	GlaxoSmithKline	Hib	0.9% sodium chloride	24 hrs	Refrigerator or room temp
Imovax (RAB_{HDCV})	Sanofi Pasteur	Rabies virus	Sterile water	Immediately†	Refrigerator
M-M-R II (MMR)	Merck	MMR	Sterile water	8 hrs	Refrigerator or room temp
Menveo (MenACWY)	GlaxoSmithKline	MenA	MenCWY	8 hrs	Refrigerator
Pentacel (DTaP-IPV/Hib)	Sanofi Pasteur	Hib	DTaP-IPV	Immediately†	Refrigerator
ProQuad (MMRV)	Merck	MMRV	Sterile water	30 min	Refrigerator or room temp
RabAvert (RAB_{PCECV})	GlaxoSmithKline	Rabies virus	Sterile water	Immediately†	Refrigerator
Rotarix (RV1)‡	GlaxoSmithKline	RV1	Sterile water, calcium carbonate, and xanthan	24 hrs	Refrigerator or room temp
Shingrix (RZV)	GlaxoSmithKline	RZV	$AS01_B$§ adjuvant suspension	6 hrs	Refrigerator
Varivax (VAR)	Merck	VAR	Sterile water	30 min	Refrigerator or room temp
YF-VAX (YF)	Sanofi Pasteur	YF	0.9% sodium chloride	60 min	Refrigerator or room temp
Zostavax (ZVL)	Merck	LZV	Sterile water	30 min	Refrigerator or room temp

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

1 For single-dose vaccine products (exception is Rotarix‡), select a syringe and needle of proper length to be used for both reconstitution and administration of the vaccine. For Rotarix, see the package insert.‡

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

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

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

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

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*If the reconstituted vaccine is not used within this time period, it must be discarded.

†For purposes of this guidance, IAC defines "immediately" as within 30 minutes or less.

‡Rotarix vaccine is administered by mouth using the applicator that contains the diluent. It is not administered as an injection.

§$AS01_B$ is composed of 3-O-desacyl-4'-monophosphoryl lipid A (MPL) from *Salmonella minnesota* and QS-21, a saponin purified from plant extract *Quillaja saponaria* Molina, combined in a liposomal formulation. The liposomes are composed of dioleoyl phosphatidylcholine (DOPC) and cholesterol in phosphate-buffered saline solution containing disodium phosphate anhydrous, potassium dihydrogen phosphate, sodium chloride, and water for injection.

Technical content reviewed by the Centers for Disease Control and Prevention

Immunization Action Coalition Saint Paul, Minnesota ▪ 651-647-9009 ▪ www.immunize.org ▪ www.vaccineinformation.org

www.immunize.org/catg.d/p3040.pdf ▪ Item #P3040 (8/18)

Skills Checklist for Vaccine Administration

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 X) to 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" helps ensure that staff administer vaccines correctly. It may be ordered 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.

		Self-Assessment		Supervisor Review		
COMPETENCY	CLINICAL SKILLS, TECHNIQUES, AND PROCEDURES	NEEDS TO IMPROVE	MEETS OR EXCEEDS	NEEDS TO IMPROVE	MEETS OR EXCEEDS	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, 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 vaccine at recommended temperature and protects MMR from light.					

CONTINUED ON THE NEXT PAGE ▶

Adapted from California Department of Public Health, Immunization Branch

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

Technical content reviewed by the Centers for Disease Control and Prevention
www.immunize.org/catg.d/p7010.pdf • Item #P7010 (10/17)

		Self-Assessment		Supervisor Review		
COMPETENCY	CLINICAL SKILLS, TECHNIQUES, AND PROCEDURES	NEEDS TO IMPROVE	MEETS OR EXCEEDS	NEEDS TO IMPROVE	MEETS OR EXCEEDS	PLAN OF ACTION
C **Vaccine Preparation**	1. Performs proper hand hygiene prior to preparing vaccine.					
	2. When removing vaccine from the refrigerator or freezer, looks at the storage unit's temperature to make sure it is in proper range.					
	3. Checks vial expiration date. Double-checks vial label and contents prior to drawing up.					
	4. Prepares and draws up vaccines in a designated clean medication area that is not adjacent to areas where potentially contaminated items are placed.					
	5. Selects the correct needle size for IM and Subcut based on patient age and/or weight, site, and recommended injection technique.					
	6. Maintains aseptic technique throughout, including cleaning the rubber septum (stopper) of the vial with alcohol prior to piercing it.					
	7. Shakes vaccine vial and/or reconstitutes and mixes using the diluent supplied. Inverts vial and draws up correct dose of vaccine. Rechecks vial label.					
	8. Prepares a new sterile syringe and sterile needle for each injection. Checks the expiration date on the equipment (syringes and needles) if present.					
	9. Labels each filled syringe or uses labeled tray to keep them identified.					
D **Administering Immunizations**	1. Rechecks the provider's order or instructions against the vial and the prepared syringes.					
	2. Utilizes proper hand hygiene with every patient and, if it is office policy, puts on disposable gloves. (If using gloves, changes gloves for every patient.)					
	3. Demonstrates knowledge of the appropriate route for each vaccine.					
	4. Positions patient and/or restrains the child with parent's help.					
	5. Correctly identifies the injection site (e.g., deltoid, vastus lateralis, fatty tissue over triceps).					
	6. Locates anatomic landmarks specific for IM or Subcut injections.					
	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.					

CONTINUED ON THE NEXT PAGE ▶

		Self-Assessment		Supervisor Review		
COMPETENCY	CLINICAL SKILLS, TECHNIQUES, AND PROCEDURES	NEEDS TO IMPROVE	MEETS OR EXCEEDS	NEEDS TO IMPROVE	MEETS OR EXCEEDS	PLAN OF ACTION
D **Administering Immunizations** (continued)	8. Controls the limb with the non-dominant hand; holds the needle an inch from the skin and inserts it quickly at the appropriate angle (90° for IM or 45° for Subcut).					
	9. Injects vaccine using steady pressure; withdraws needle at angle of insertion.					
	10. Applies gentle pressure to injection site for several seconds (using, e.g., gauze pad, bandaid).					
	11. Uses strategies to reduce anxiety and pain associated with injections.					
	12. Properly disposes of needle and syringe in "sharps" container.					
	13. Properly disposes of vaccine vials.					
E **Records Procedures**	1. Fully documents each vaccination in patient chart: date, lot number, manufacturer, site, VIS date, name/initials.					
	2. If applicable, demonstrates ability to use state/local immunization registry or computer to call up patient record, assess what is due today, and update computerized immunization history.					
	3. Asks for and updates patient's vaccination record and reminds them to bring it to each visit.					

Plan of Action

Circle desired next steps and write in the agreed deadline for completion, as well as date for the follow-up performance review.

a. Watch video on immunization techniques and review CDC's Vaccine Administration eLearn, available at www.cdc.gov/vaccines/hcp/admin/resource-library.html.
b. Review office protocols.
c. Review manuals, textbooks, wall charts, or other guides.
d. Review package inserts.
e. Review vaccine storage and 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 demonstrated appropriate immunization skills.
j. Role play (with other staff) interactions with parents and patients, including age appropriate comfort measures.
k. Attend a skills training or other appropriate courses/training.
l. Attend healthcare customer satisfaction or cultural competency training.
m. Renew CPR certification.

Other _____

File the Skills Checklist in the employee's personnel folder.

PLAN OF ACTION DEADLINE

DATE OF NEXT PERFORMANCE REVIEW

EMPLOYEE SIGNATURE DATE

SUPERVISOR SIGNATURE DATE

12. Vaccine Information Sources

In addition to these general recommendations, the following sources contain specific and updated vaccine information.

CDC-INFO Contact Center

The CDC-INFO contact center is supported by CDC and provides public health-related information, including vaccination information, for health-care providers and the public, 24 hours a day, 7 days a week. To contact CDC-INFO online at any time, visit wwwn.cdc.gov/dcs/RequestForm.aspx. To contact CDC-INFO by telephone, call between 8 am to 8 pm Eastern Time Monday through Friday at [English and Spanish]: 800-232-4636; telephone [TTY]: 800-232-6348.

CDC's National Center for Immunization and Respiratory Diseases

CDC's National Center for Immunization and Respiratory Diseases website provides direct access to ACIP's best practices for vaccination guidance, vaccination schedules, automated child schedulers, an adult immunization scheduler, vaccine safety information, publications, provider education and training, and links to other vaccination-related websites (www.cdc.gov/vaccines/recs/immuniz-records.htm).

Morbidity and Mortality Weekly Report (MMWR)

Some ACIP guidance regarding vaccine use, statements of vaccine policy as they are developed, and reports of specific disease activity are published by CDC in the *MMWR* series and can be found at www.cdc.gov/vaccines/pubs/ACIP-list.htm. Electronic subscriptions are free (www.cdc.gov/mmwr/mmwrsubscribe.html). Subscriptions to print versions also are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402-9235 (telephone: 202-512-1800).

American Academy of Family Physicians (AAFP)

Information from the professional organization of family physicians is available at www.aafp.org.

American Academy of Pediatrics (AAP)

Every 3 years, AAP issues the *Red Book: Report of the Committee on Infectious Diseases*, which contains a composite summary of AAP and ACIP recommendations concerning infectious diseases and vaccinations for infants, children, and adolescents (telephone: 888-227-1770; website: www.aap.org).

American College of Physicians (ACP)

Produced by faculty of ACP's Quality Improvement Programs and members of the ACP Adult Immunization Advisory Board, the ACP Guide to Adult Immunization helps internists develop systematic processes for incorporating immunization in their day-to-day practice (see www.acponline.org/).

American Congress of Obstetricians and Gynecologists (ACOG)

The American Congress of Obstetricians and Gynecologists (ACOG), formerly the American College of Obstetricians and Gynecologists, is a professional association of physicians specializing in obstetrics and gynecology in the United States. Information about ACOG can be found at www.acog.org.

American Pharmacists Association (APhA)

Founded in 1852, APhA is the largest association of pharmacists in the United States, with more than 62,000 practicing pharmacists, pharmaceutical scientists, student pharmacists, pharmacy technicians as members. Information about APhA educational activities can be found at www.pharmacist.com/immunization-center.

Group on Immunization Education of the Society of Teachers of Family Medicine

The Group on Immunization Education of the Society of Teachers of Family Medicine provides information for clinicians, including the free program Shots. Shots includes the childhood, adolescent, and adult schedules for iPhone, Palm, and Windows devices, as well as online versions (www.immunizationed.org/).

Immunization Action Coalition (IAC)

IAC provides child, teen, and adult immunization information for health care professionals and their patients at www.immunize.org. Free materials include CDC-reviewed technical pieces, patient handouts, VISs in multiple languages, and the weekly immunization news and information service "IAC Express," available at www.immunize.org/express. Information for the general public about vaccines and vaccine-preventable diseases is available at www.vaccineinformation.org.

Institute for Vaccine Safety

Located at the Johns Hopkins University School of Public Health, the Institute for Vaccine Safety provides information about vaccine safety concerns and objective and timely information to physicians and health-care providers and parents. The Institute for Vaccine Safety also includes links to tables that include all vaccine components (www.vaccinesafety.edu).

State and Local Health Departments

State and local health departments provide technical advice through hotlines, e-mail, and websites, including printed information regarding vaccines and immunization schedules, posters, and other educational materials (see www.cdc.gov/vaccines/imz-managers/awardee-imz-websites.html and www.cdc.gov/mmwr/international/relres.html).

Vaccine Education Center

Located at the Children's Hospital of Philadelphia, the Vaccine Education Center provides patient and provider vaccine information (www.chop.edu/centers-programs/vaccine-education-center).

Indiana Immunization Coalition

Provides children, teens, and adult immunization information for providers and their patients at vaccinateindiana.org

Indiana State Department of Health Children and Hoosiers Immunization Registry Program - Quick Reference Guide

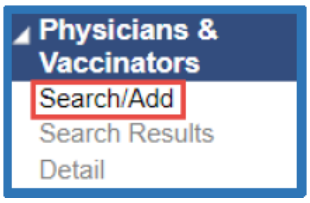
Adding and Managing Physicians and Vaccinators

Why Add and Manage Physicians & Vaccinators for My Organization or Facility in CHIRP?

Managing physicians and vaccinators in CHIRP ensures that the vaccinator's name displays on patient immunization records and CHIRP reports. Each physician and vaccinator set up in CHIRP has an assigned **Physician ID** (SIISCLIENT number) that must be used when sending HL7 messages. If the correct ID is sent in your HL7 messages, the patient's vaccination record will display the correct vaccinator name on the **Vaccination Detail** Screen. Adding physicians and vaccinators also allows their names to appear in the **Vaccinator** and/or **Ordering Provider** drop down menus when manually adding doses to a patient's record in the CHIRP.

How Can I Locate the Physicians & Vaccinators under my Organization/Facility in the CHIRP?

1. Select the **Physicians & Vaccinators** tab from the left navigation menu. Then select **Search/Add.**

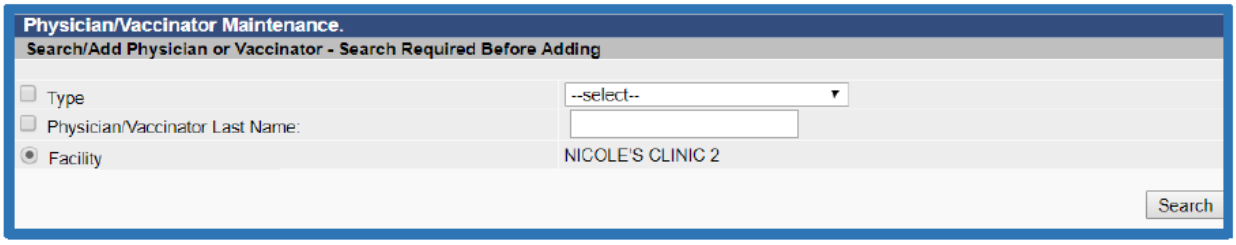


Tip: If you do not see **Physicians & Vaccinators** in your left menu, this means you need to have a permission **called Physician Administrator** added to your CHIRP user account. Contact CHIRP for assistance with adding this permission.

2. On the **Physician/Vaccinator Maintenance** screen, you may see the option to select a facility or you may be limited to viewing physicians/vaccinators for one facility (as shown below).

    a. You can search for Physicians, Vaccinators, or both a Physician and a Vaccinator in the **Type** drop down box.

    b. Click **Search.**



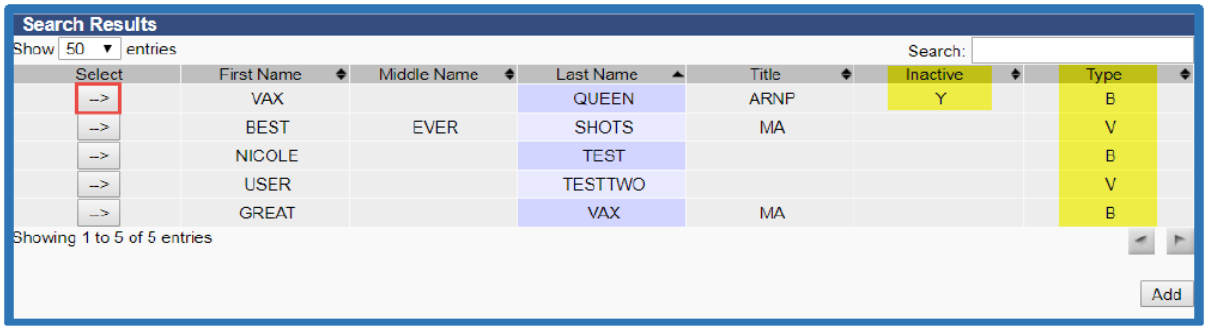
3. The report shows all physicians and vaccinators from the specified organization or facility, sorted alphabetically by last name.

Indiana State Department of Health

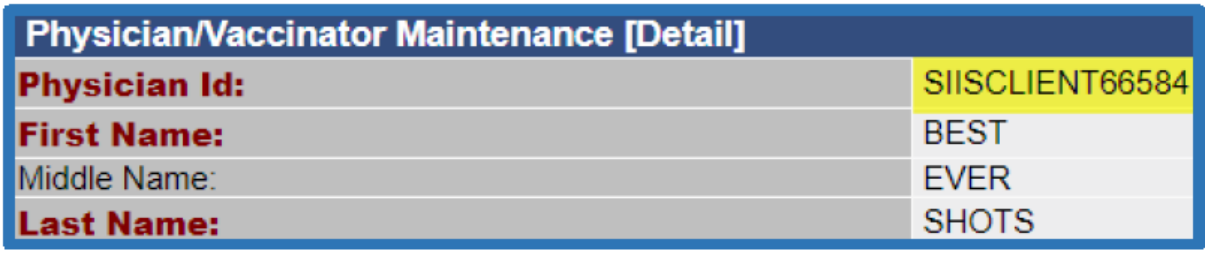
4. The **Inactive** column displays physicians and vaccinators that have been inactivated with a “Y”.

5. The **Type** column indicates if the vaccinator is a physician “P”, vaccinator “V”, or both “B”.

6. Click the arrow →button in the left column to open the **Physician/Vaccinator Maintenance Detail** screen.



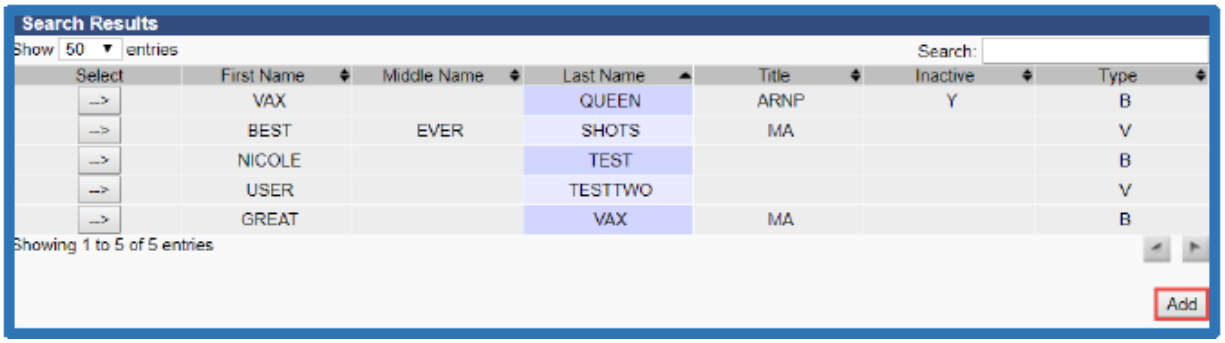
7. The **Physician/Vaccinator Maintenance Detail** screen displays the **Physician Id** (SIISCLIENT number)**,** which is the unique ID for that physician/vaccinator. From this screen, you can click the **Edit** button to make edits to the physician’s/vaccinator’s information or inactivate them if they no longer work at your organization/facility.



Tip: The **Physician ID** (SIISCLIENT66584 in the example above) must be used in HL7 messages sent from your EMR in order for the vaccinator name to display in the patient’s record and in IIS reports.

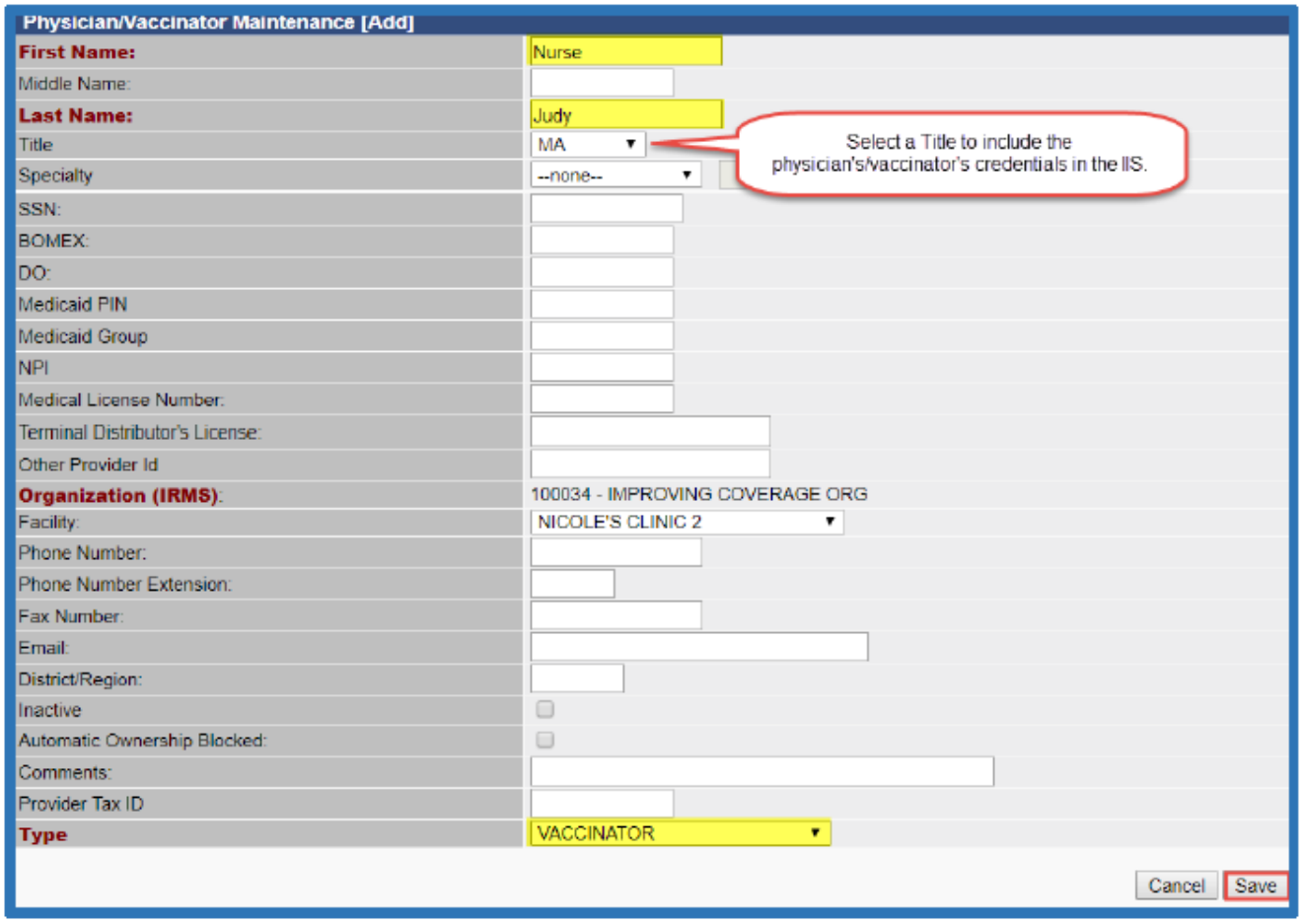
How Can I Add a New Physician/Vaccinator?

1. Follow steps 1-3 above to search for current physicians/vaccinators. If the physician/vaccinator is not listed, click the **Add** button at the bottom of the search results.



2. Enter information in the required fields, including: **name** and **type** (physician, vaccinator, or both). Fields in **red** are required in order to add the physician/vaccinator.

3. Click **Save**. The physician/vaccinator will now show in the **Physicians & Vaccinators** search results.



Questions? Please Contact the CHIRP Help Desk at 1-888-227-4429 or email chirp@isdh.in.gov

Indiana State Department of Health
Children and Hoosier Immunization Registry Program

Lot Decrement Cheat Sheet

- Lots in your CHIRP inventory are automatically set to decrement **if the incoming record from the EMR matches with the inventory in CHIRP**
- Please make sure that the following information from the EMR matches with the CHIRP inventory so lots will decrement:
  - Lot information (needs to exist in the CHIRP inventory)
  - CVX code
  - Lot number
  - Manufacturer code
  - Lot expiration date
  - Correct VFC status

Please call the CHIRP Help Desk at 888-227-4439 with patient examples if you have decrement issues. Please have the patient's CHIRP SIIS number ready.

Indiana State Department of Health

Indiana State Department of Health Children and Hoosiers Immunization Registry Program - Quick Reference Guide

Running a Coverage Rate Report

Why Would I Run the Coverage Rate Report?

The coverage rate report allows organizations and clinics to measure their immunization rates (number and percent of patients up-to-date with vaccines) and obtain lists of patients who are due for vaccines.

How Do I Run the Coverage Rate Report?

1. Click on **Report Module** under the **Reports** heading in the left menu.

2. Click on **Coverage Rate Report**. You can find this report under the **Registry** reports heading.

3. Most clinics run this report **By Ownership**.

   - This is the best option to assess your clinic's immunization rates because it limits the report to patients you "own" in CHIRP.
   - Clinics who do not own patients in CHIRP (e.g. pharmacies), can run this report **By Service** to include all patients who received a vaccination at their clinic.

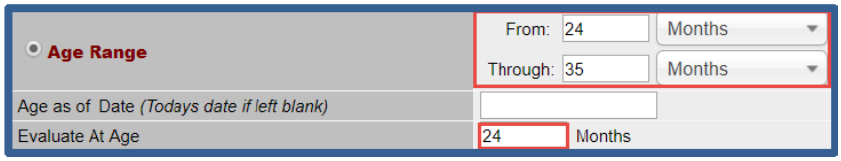
4. Select a **Series** or a **Vaccine** type from one of the drop down boxes.

5. You can opt to enter a **Vaccine Date Range** if you select from the **Vaccine** drop down box. This allows you to assess coverage during a certain timeframe. You cannot enter a **Vaccine Date Range** if you select a **Series**.

After choosing a series. You can click on **Series Description** to see which vaccines and how many doses of each are included in that series

6. Enter an **Age Range** and choose months or years from the drop down box.

   - Enter an **Age as of Date** or leave it blank to use today's date. In the **example shown**, the **Age as of Date** field is blank, so this report includes patients' ages 24 through 35 months as of today's date. If you enter the age range as 24 through 35 months as of 1/1/18, the patients included in the report were born between 1/2/15 – 1/1/16.



If you enter an age in the **Evaluate At Age** field, you must also select the **Not Yet Due** checkbox in the **Display Report Columns** section to assess how many patients were UTD for the selected series or vaccine by that age.

7. Enter an age (in months) if you want to include an **Evaluate at Age** or you can leave this field blank.

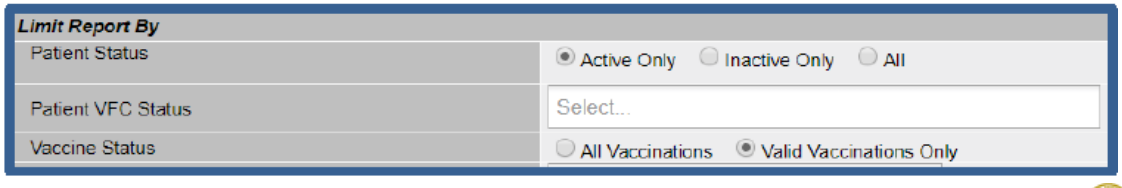
   - If you include an **Evaluate at Age**, the report assesses whether patients are up-to-date by the age typed in this field.
   - In the **example above**, the report will measure whether patients were up-to-date by age 24 months. If you leave this field blank, the report measures whether the patient was up-to-date at any age within the age range (e.g. at any time between the ages 24 – 35 months).

8. You can limit the report by several different criteria:

   - **Patient Status**
     i. Active Only – Recommended for organizations and clinics who own patients in CHIRP.
     ii. Inactive Only – Includes patients previously inactivated by an organization or clinic. This option, or the all option described below, are recommended for non-owning organizations and clinics because all patients are listed as inactive in CHIRP for those types of organizations and clinics.
     iii. All – Includes active and inactive patients.

   - **Patient VFC Status**
     i. Use this field to assess coverage for a specific Vaccines for Children (VFC) eligibility status (e.g. assess coverage rates for VFC-eligible – Medicaid/Medicaid Managed Care patients).

   - **Vaccine Status**
     i. All Vaccinations – Includes all vaccinations on the patient's record regardless of whether they were given according to the recommended immunization schedule.
     ii. Valid Vaccinations Only - Preferred option so you only count patients up-to-date if they received vaccinations given at the recommended ages and intervals.

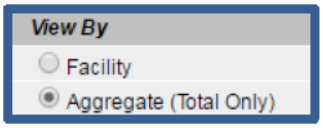


- Exclude patients who have either no forecast or aged out
    i. If you check this box, any patients who are up-to-date for the selected vaccine or series, will not be included on the patient list version of this report. **Choosing this option doesn't affect coverage rates, it just removes these patients from the patient list.**

You can also limit the report by patient race and/or gender, as well as patient county or zip code

9. Choose how to view the report. Different options are available depending on your type of CHIRP user account. For example, if your CHIRP account is limited to one facility, you only have the options shown in the screenshot.

    - **Facility**
        i. View the coverage rates for one facility. For organization-level accounts, this option breaks down the results by facility and provides organization-wide coverage rates.
    - **Aggregate**
        i. This option only provides coverage rate totals. For facility-level accounts, the Facility and Aggregate options provide the same results.



10. Choose the immunization measures to display on report. See below:

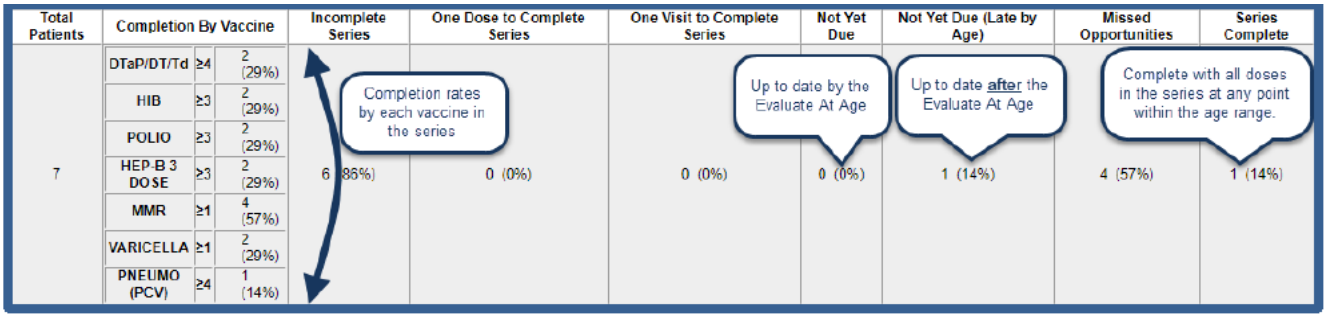
    - Complete By Vaccine
    - Incomplete Series
    - One Dose to Complete Series
    - One Visit to Complete Series
    - Not Yet Due
    - Not Yet Due (Late by Age)
    - Missed Opportunities

If you select a series that includes multiple doses of the same vaccine (i.e. HPV 1, 2, and 3 dose series), you can only select the **Complete By Vaccine** measure.

11. Choose your report output.

    - **Create or Export Coverage Report**
        i. These two options show a summary coverage by numbers and percentages of patients.
    - **Create or Export Patient List**
        i. These two options provide a list of all the patients included in the coverage report and displays which vaccines they need. You can choose to exclude up-to-date or aged out patients from this list by marking the checkbox **exclude patients who have either no forecast or aged out** in the **Limit Report By** section.

Understanding Your Report Results



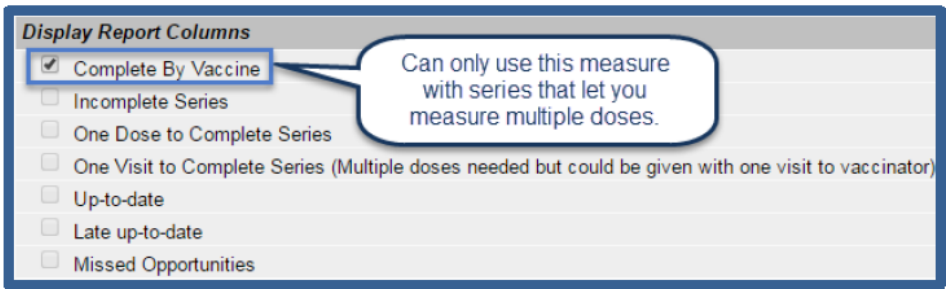
Total Patients	**Total number of patients included in the report.**
Completion by Vaccine	Includes patients who are up-to-date with each vaccine in the selected series. In the screenshot below, each of the vaccines listed under **Completion By Vaccine** were included in the selected series. In this example, 100 percent of this clinic's patients were up-to-date with one dose of Meningococcal vaccine, but only 75 percent were up-to-date with 1 dose of HPV vaccine. If you include an **Evaluate At Age**, these rates reflect the percent **up-to-date** by that age.
Incomplete Series	Includes patients who are not up-to-date with all the vaccines in the selected series.
One Dose to Complete Series	Includes patients who only need one more dose of vaccine to complete the selected series.
One Visit to Complete Series	Includes patients who can get all doses of vaccine they need to be up-to-date with the selected series in one visit.
Up-to Date	Includes patients who are up-to-date with all doses in the selected series by the **Evaluate At Age.** You can only select this measure if you entered an age in the **Evaluate At Age** field.
Late Up-to-Date	Includes patients currently up-to-date with all doses in the selected series, but who weren't up-to-date until after the age entered in the **Evaluate at Age** field**.** You can only select this measure if you entered an age in the **Evaluate At Age** field.
Missed Opportunities	Includes patients who were due for multiple vaccines in the selected vaccine series, but at their last immunization visit they did not receive all of them. This measure doesn't include missed opportunities when patients come in for a visit and receive no vaccinations.
Series Complete	Includes patients who are up-to-date with all doses in the selected series (this measure doesn't look at whether a patient was up-to-date by an **Evaluate At Age**). You may notice that this rate is lower than the **Completion by Vaccine** rates for each vaccine. The **Series Complete** rate is typically lower than individual vaccine rates, because the patient must have every dose of the vaccines in the series in order to be counted in the Series Complete rate.

Running the Report to Measure Multi-Dose Coverage

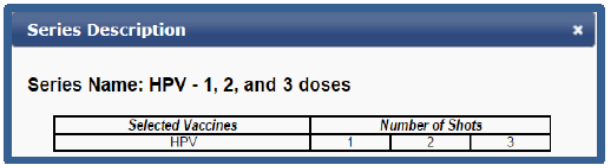
Some of the options in the **Series** drop down box display completion rates by dose for a vaccine family.

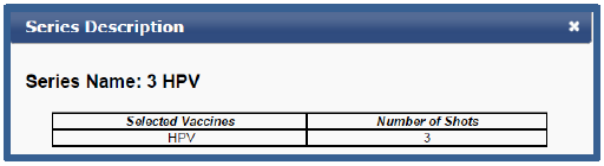
Aggregate (Total Only)	Total Patients	Completion By Vaccine			Series Complete
TOTAL	523	HPV	≥1	144 (28%)	33 (6%)
			≥2	67 (13%)	
			≥3	33 (6%)	

When you run this type of vaccine series, you can only choose the **Complete By Vaccine** measure.



In the example above, **HPV – 1, 2, and 3 doses** series was selected. If you click the **Series Description** link next to the **Series** dropdown box, you can see that this series measures HPV vaccine coverage by dose. If you select the **3 HPV** series shown on the right, the report only measures how many patients received three doses of HPV.





How does the Report Calculate Coverage for Each Dose in the Series?

When are measured for each dose in a series, the coverage report calculates the number of patients who received *at least* that number of doses.

Using the example above, if you select the **HPV – 1, 2, and 3 doses** series:

- **HPV 1** = total number of patients who received at least 1 dose of HPV.
- **HPV 2** = total number of patients who received their 1st and 2nd doses of HPV. Patients who received two doses of HPV are counted in the HPV 1 and HPV 2 measures.
- **HPV 3** = total number of patients who received their 1st, 2nd, and 3rd doses of HPV. Patients who received three doses of HPV are counted in the HPV 1, HPV 2, and HPV 3 measures.

Questions? Please Contact the CHIRP Help Desk at 1-888-227-4429 or email chirp@isdh.in.gov

Indiana State Department of Health Children and Hoosiers Immunization Registry Program - Quick Reference Guide

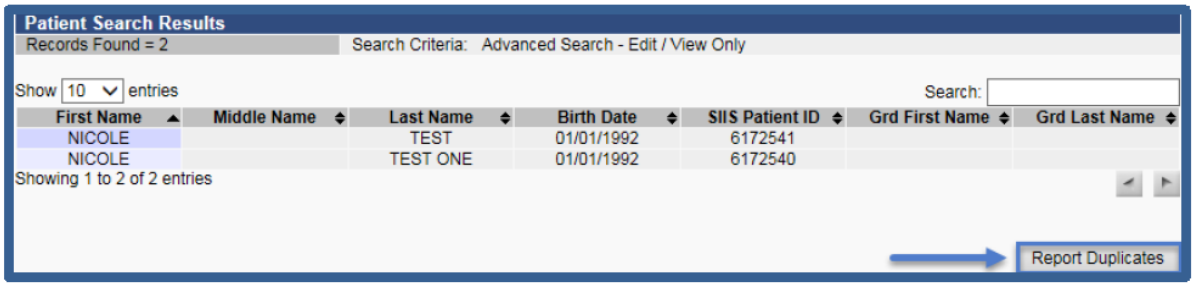
How to Report Duplicate Patients in CHIRP

Why Should I Report Duplicate Patients?

Reporting duplicate patients found in CHIRP helps to improve the accuracy and completeness of patient vaccination records. When you search for patients in CHIRP, you may see patients with similar names and birth dates. If you think they are the same patient, you can report the possible duplicates in the CHIRP.

How Can I Report Duplicate Patients?

1. If you identify possible duplicate patients in the **Patient Search Results**, click on the **Report Duplicates** button.

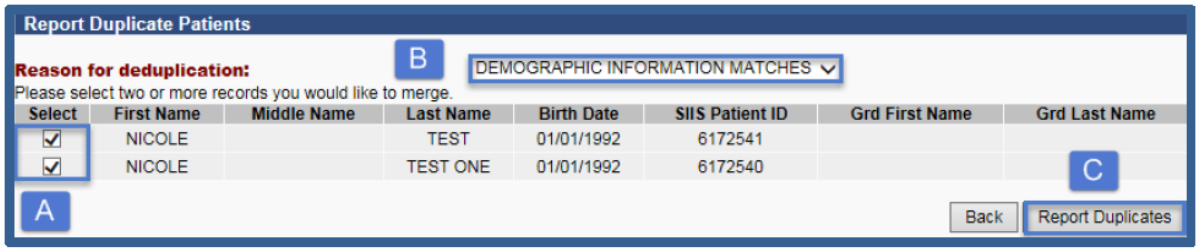


2. On the **Report Duplicate Patients** screen:

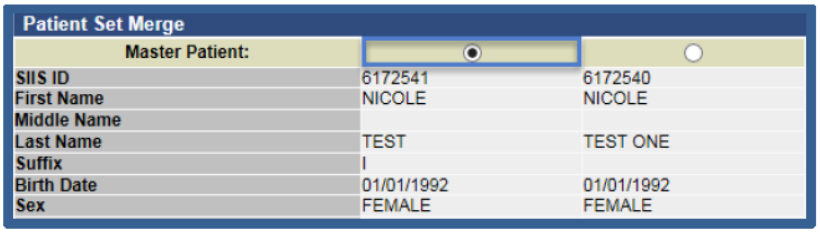
   A. Click the checkbox next to the possible duplicate patients.

   B. Select a **reason for deduplication** from the drop down box at the top of the screen.

   C. Click the **Report Duplicates** button.



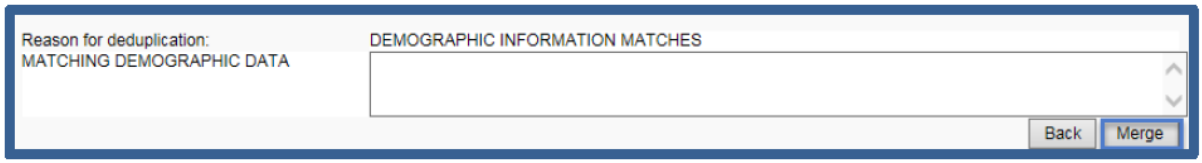
3. Mark the record you think should be primary (Master) for the patient using the radio button above the patient's name.



Indiana State Department of Health

Tip: Usually the most complete record, the one with the most updated information (i.e. current address), or the one with the correct spelling of the patient's name should be marked as the master record

4. Type any additional notes about why you think the patients are duplicates in the text box and click the **Merge** button.



5. ISDH reviews user-reported duplicates daily and usually merges the records within 24 hours

Questions? Please Contact the CHIRP Help Desk at 1-888-227-4429 or email chirp@isdh.in.gov

INDIVIDUAL USER AGREEMENT

State Form 52303 (R3 / 7-13)
INDIANA STATE DEPARTMENT OF HEALTH, IMMUNIZATION PROGRAM

Internal Use Only
IRMS
Facility
Online Date

INSTRUCTIONS: *1. Each user within your facility must complete this form*
2. Return page one (1) via fax to 317-233-8827 or mail to:
Immunization Dept.; 2 North Meridian Street, Section #6A-22, Indianapolis, IN 46204

INDIVIDUAL USER AGREEMENT AND CONFIDENTIALITY STATEMENT

Site Manager: Please have the employee in your facility who needs CHIRP access to read and sign this form. You must also indicate at the bottom of this form the level of use for this User and sign. This form must be completed prior to receiving a User ID and password. **The signed copy of this form is to be kept in the Employee's Personnel File.** To delete a User from your site use the Remove User form. Fax this form to the CHIRP program at 317-233-8827 within one week of the User's last day of employment.

User: The Children and Hoosier Immunization Registry Program (*CHIRP*) is implemented by the Indiana State Department of Health under the authority of Indiana Code §16-38-5. It allows for the sharing of immunization information among authorized health care providers, schools, and licensed childcare centers to assure adequate immunization, avoid unnecessary immunizations, meet immunization requirements, and to control disease outbreaks.

All information in the system is confidential, and all users have a responsibility to abide by confidentiality laws. Users who violate these laws will have access to CHIRP immediately revoked by the Registry Manager. An incident report will be filed, and following investigation, appropriate action will be taken, which may include a civil or monetary penalty, as allowed by state law. Patient- or provider-specific information is only available to authorized users.

By signing this form, the User acknowledges the conditions under which access to the CHIRP system is granted, and agrees to the following:

- I have read and agree to abide by the CHIRP Confidentiality Policy (*see page 2 of this form*).
- I understand that CHIRP data is confidential and may only be used as outlined in this form.
- I understand that my User ID and password are for my use only.
- I am responsible for safeguarding my User ID and password.
- I may not give my User ID or password to any other individual.
- I will not post my User ID or password.
- I understand that I will be required to change my password periodically.
- I agree not to leave the computer unattended when I have a CHIRP session open.
- I agree to log off and close the browser when I am finished with a CHIRP session.

_____ _____ _____
Employee Name *(please print legibly)* Employee Signature Date *(month, day, year)*

_____
Facility Name

_____
Facility Location *(Street Address, City, State, ZIP)*

_____ _____
Telephone *(including area code)* Individual e-mail address *(Group or multi-user e-mail is unacceptable.)*

❒ *Hospital Employee or Contractor* ❒ *Medical Professional* _____ *(i.e.: LPN, RN, MD, etc.)*

❒ *Pharmacy*_____ *(i.e.: Employee, Pharmacist, Pharmacy Tech, etc.)*

SIGNATURE REQUIRED TO PROCESS REQUEST: This individual is approved to access CHIRP for this facility.

Access Required: ❒-View Only ❒-Full-Access ❒-Lead Results ❒-Inventory Lot Management ❒-School Nurse

Site Manager or Supervisor Signature: _____

Confidentiality Policy

Indiana Code §16-38-5-1 authorizes the Indiana State Department of Health (*ISDH*) to develop an immunization registry. The purpose of the registry is to consolidate immunization information among health care providers, assure adequate immunization levels, and to avoid unnecessary immunizations. This policy defines provisions under which the system operates.

Access is limited to sites that either provide immunization services or are require to ensure that persons are immunized. Patient specific information is only available to authorized users.

The privacy of participants and the confidentiality of information contained in the registry shall be protected at all times by all authorized users.

I. Provider Site Agreement

The Provider Site Agreement must be signed by the site manager or designee, who assumes responsibility for the proper use and protection of registry data at their site. Each site must designate authorized users, who will be issued user names and passwords. Each individual user must also sign the User Agreement stating that s/he has read the CHIRP Confidentiality Policy and agrees to abide by its provisions. The User Agreement must be kept with the employee personnel file as documentation.

The Site Manager will notify the CHIRP Support Center when accounts need to be deleted or created due to changes in personnel.

Users who willfully misuse information contained in the registry will have their access immediately restricted by ISDH. An incident report will be filed, and following investigation, appropriate action taken, which may include civil fines and penalties.

II. Consent

In accordance with state law, data may be reported to the registry without the specific written authorization of the patient.

III. Use of Registry Data

Authorized users may access the registry, when needed, to coordinate immunization services, assure adequate immunization, assess immunization coverage levels, confirm compliance with immunization requirements, control disease outbreaks, or to access it for reasons approved by the State Health Commissioner.

Approved researchers may request access to aggregate registry data for research and statistical purposes, determined in accordance with department rules. Providers may only access records of patients for whom they are clinically or contractually responsible.

Schools and licensed child care centers may be secondary users of the registry. Once authorized by signing the Site Enrollment Form and User Agreement, these users may access the system as “view-only” participants to verify patient records for compliance with school entrance requirements.

Parents/guardians and individuals may access a child’s immunization record through their health care provider, local county health department, or ISDH. Authorized users must allow the parent or guardian to inspect, copy, and if necessary, amend or correct their child’s immunization records if s/he demonstrates that the record is incorrect by providing verifiable documentation of immunization.

IV. Security Procedures

All enrolled sites shall maintain reasonable and appropriate administrative, technical, and physical safeguards to ensure the integrity and confidentiality of health information. Registry staff may conduct periodic assessments on privacy and security policies.

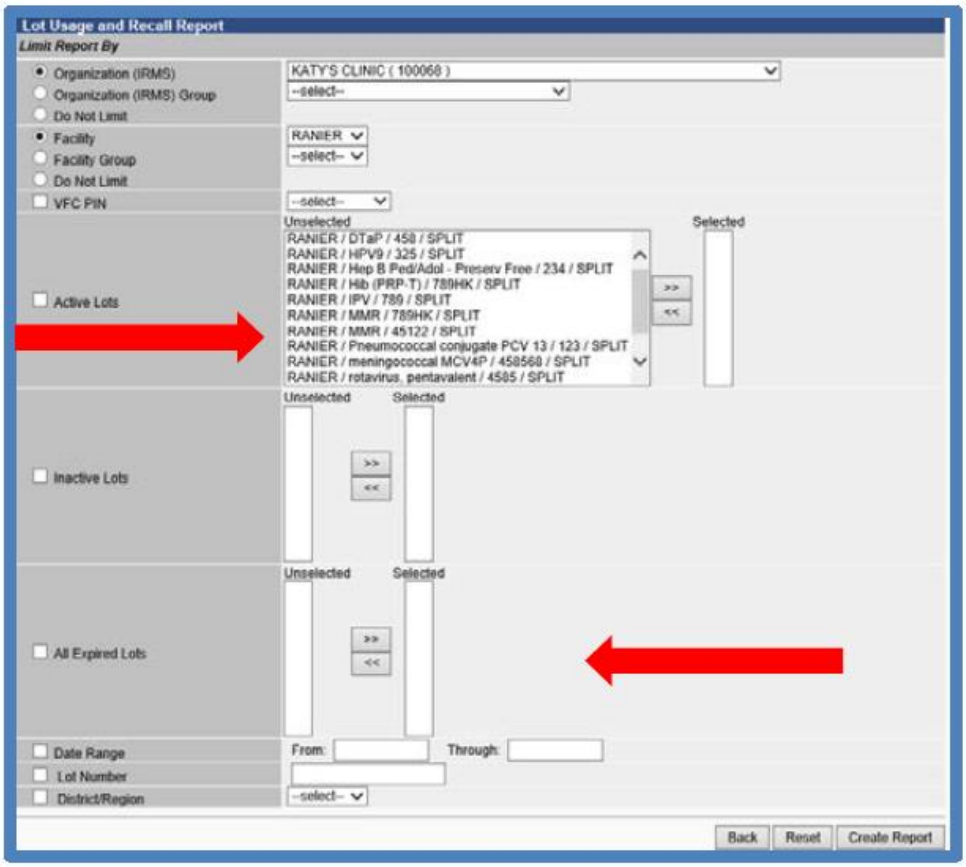
Indiana State Department of Health Children and Hoosiers Immunization Registry Program - Quick Reference Guide

Lot Usage and Recall Report

Why Would I Use the Lot Usage and Recall Report?

Clinics can use this report to identify all patients who have received a vaccine with a certain lot number. This report can assist with troubleshooting inventory when you experience discrepancies between your vaccine counts and your CHRIP reconciliation page. This report can also be used to document compromised vaccines on all patient records that received recalled or compromised lots.

How Can I Run the Report?



1. Log in to CHIRP, select **Reports,** and **Report Module**

2. Under the **Vaccination** section, select the **Lot Usage and Recall**

3. This report can be run several ways

    - The **Active Lots, Inactive Lots and Expired Lots** sections all show vaccines that the clinics has or had in inventory

4. Select a **lot number** in the left hand box

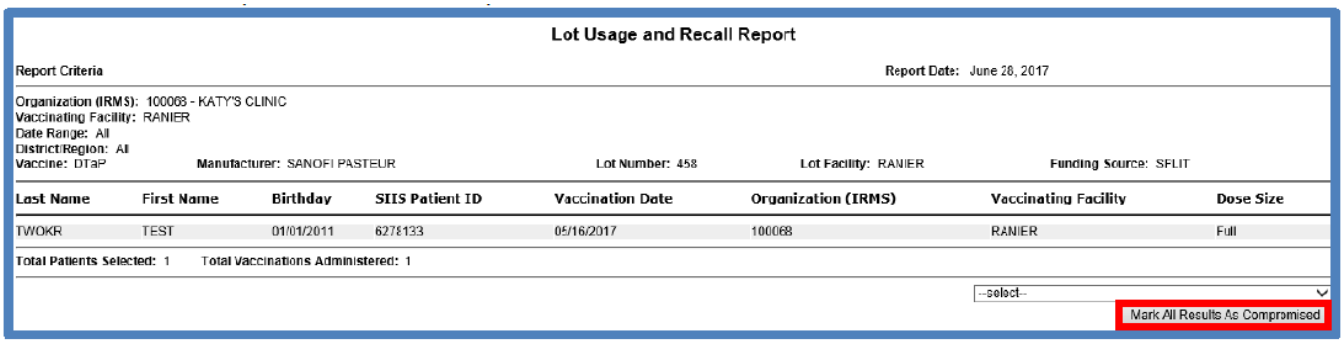
    - Then, use the arrow key to move the selected lot to the right hand box.

5. Entering a **date range** will show all patients vaccinated with the specified lots at the clinic within the selected date range

What will the Report Show if Run by Lot Number?

Running the report by lot number will show all patients vaccinated with the selected lot number (i.e. lot # 458). This can help you identify all patients that received a specific lot number of vaccine. If there happens

to be a vaccine lot recall or storage and handling incident that compromises vaccine, the **Mark all Results as Compromised** button on the bottom right will mark the doses as compromised in each patient record.



Lot Usage and Recall Report

Report Criteria — Report Date: June 28, 2017

Organization (IRMS): 100068 - KATY'S CLINIC
Vaccinating Facility: RANIER
Date Range: All
District/Region: All
Vaccine: DTaP — Manufacturer: SANOFI PASTEUR — Lot Number: 458 — Lot Facility: RANIER — Funding Source: SFLIT

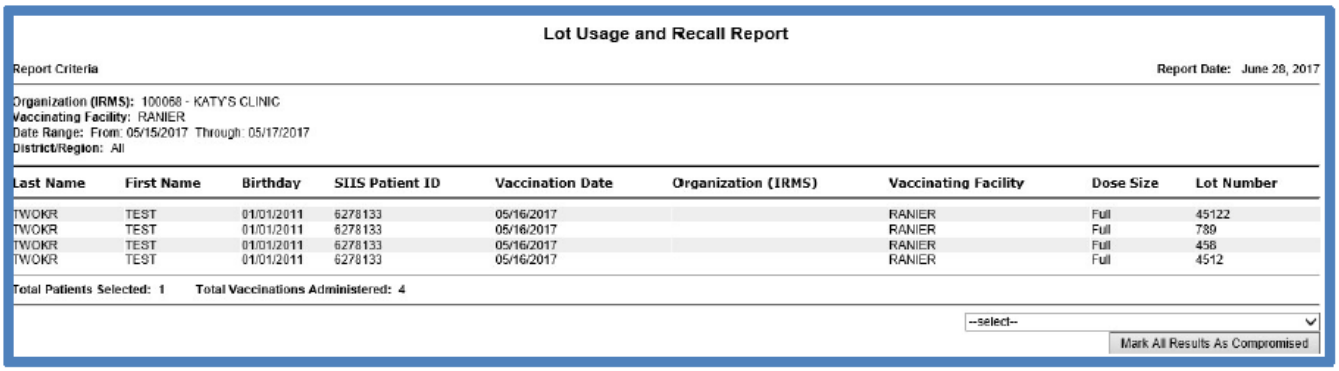
Last Name	First Name	Birthday	SIIS Patient ID	Vaccination Date	Organization (IRMS)	Vaccinating Facility	Dose Size
TWOKR	TEST	01/01/2011	6278133	05/16/2017	100068	RANIER	Full

Total Patients Selected: 1 — Total Vaccinations Administered: 1

--select-- | Mark All Results As Compromised

What Will the Report Show if Run by Vaccination Date?

If you run the report for a specific date range, it will look like the screenshot below. This shows all patients vaccinated by any lot number in your clinic's inventory during the specified date range.



Lot Usage and Recall Report

Report Criteria — Report Date: June 28, 2017

Organization (IRMS): 100068 - KATY'S CLINIC
Vaccinating Facility: RANIER
Date Range: From: 05/15/2017 Through: 05/17/2017
District/Region: All

Last Name	First Name	Birthday	SIIS Patient ID	Vaccination Date	Organization (IRMS)	Vaccinating Facility	Dose Size	Lot Number
TWOKR	TEST	01/01/2011	6278133	05/16/2017		RANIER	Full	45122
TWOKR	TEST	01/01/2011	6278133	05/16/2017		RANIER	Full	789
TWOKR	TEST	01/01/2011	6278133	05/16/2017		RANIER	Full	458
TWOKR	TEST	01/01/2011	6278133	05/16/2017		RANIER	Full	4512

Total Patients Selected: 1 — Total Vaccinations Administered: 4

--select-- | Mark All Results As Compromised

Tip: To use this report as a quality improvement tool, ensure that the patients listed match the number of vaccine that were administered. If the patient listed was not given the selected lot number, the record needs to be updated in the EMR and possibly CHIRP.

Questions? Please Contact the CHIRP Help Desk at 1-888-227-4429 or email chirp@isdh.in.gov

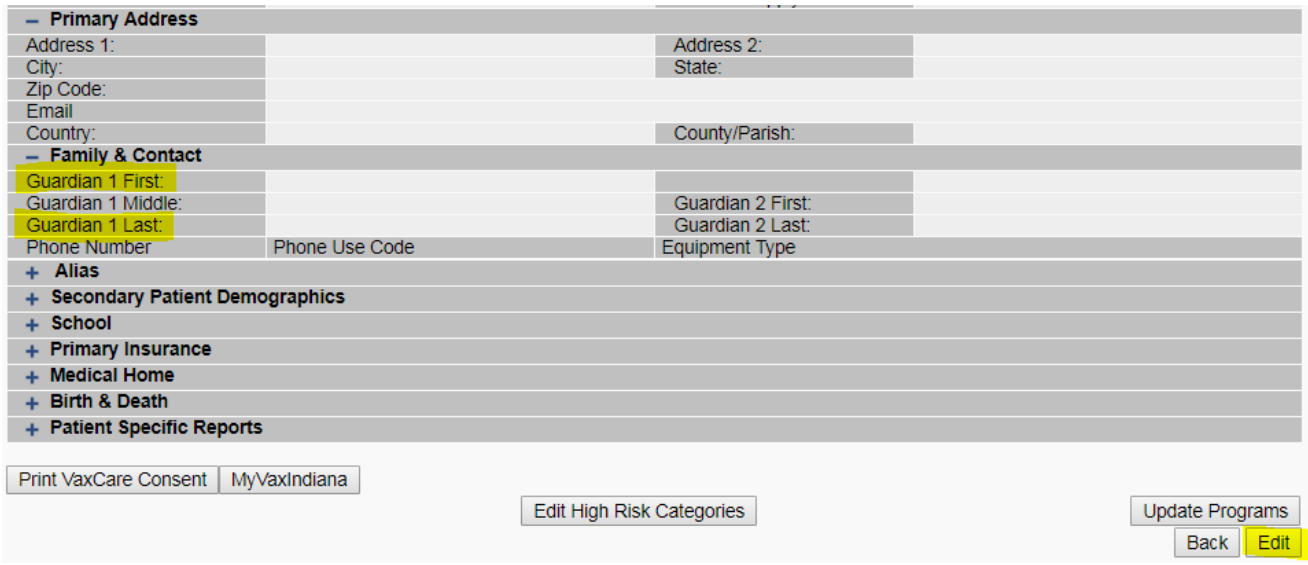
Indiana State Department of Health Children and Hoosier Immunization Registry Program - Quick Reference Guide

MyVaxIndiana Training

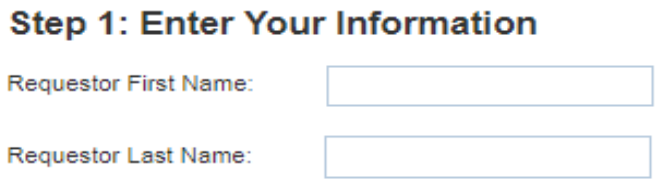
Instructions for setting up a user in MyVaxIndiana:

1. Using the **Patient Search** selection from the menu on the left, look up the patient's record.

2. Verify a parent or guardian is listed as the contact under *Family & Contact* on the **Patient Demographics** screen as seen below. This name is going to be the Requestor's name on MyVaxIndiana. A patient age 18 or younger will have a parent/guardian listed here. A patient age or older would have his/her own name. Choose **Edit** to add or update this information.



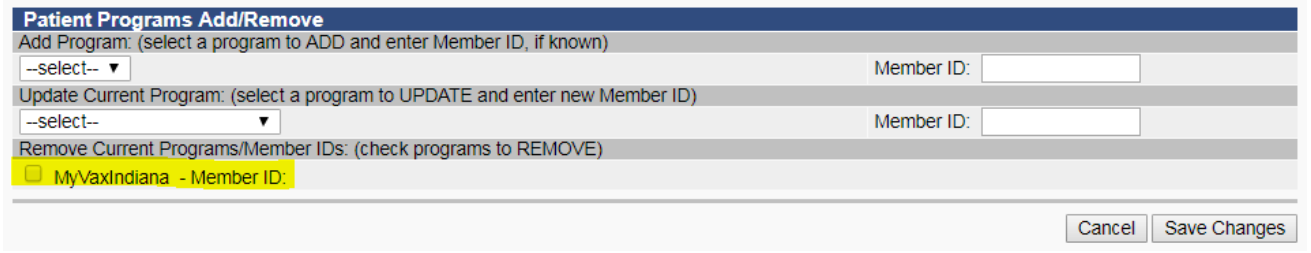
On the MyVaxIndiana portal, this is what the end user sees:



Indiana State Department of Health

3. At the bottom of the patient demographics screen, choose **Update Programs**.

4. To add MyVaxIndiana access, choose MyVaxIndiana on the **Patient Programs Add/Remove** dropdown. If they are already enrolled in the program, it will be indicated as seen here.



5. Click **Save Changes** once you have added MyVaxIndiana or have seen they have already been added to the program.

6. You can now click the **MyVaxIndiana** button on the **Patient Demographics** screen, which will load the patient instructions.

7. Print the instructions and provide to the patient or parent/guardian or select **Email** to send instructions via email. The email address on file in the **Patient Demographics** screen will be used for the email.

Frequently Asked Questions

Who should I give access to MyVaxIndiana?

MyVaxIndiana is an extension of the printable vaccine record that is already found in CHIRP. Any person that you would feel comfortable giving a printed vaccine record to, you could also give access to MyVaxIndiana.

Should I give access to every patient in my clinic/facility?

MyVaxIndiana may not be for everyone, but ISDH wanted to create an innovative way to connect individuals with their vaccine history. Some of your patients may still want just a printed vaccine record. MyVaxIndiana should be considered an extension of the printed vaccine record, and provides patients additional options for them.

Is it mandatory to participate?

No, the use of MyVaxIndiana is optional but highly encouraged. We ask that you consider it if you have any patients that specifically request access.

Who or where do we get the direct information and who will do the training?

Please refer to the training guide available on the ISDH website. The Help Desk can also walk users through the process to use MyVaxIndiana. If additional training is needed, please feel free to contact us.

What do I do about a confidential address, or a person whose information needs to be kept private?

Please do not enter the address of a person that is in protective care into the registry. If need be, just use your facility address for this person.

Can I as a provider access MyVaxIndiana?

No, only the individual or guardian of a record should access MyVaxIndiana. Providers have direct access to CHIRP and therefore do not need to access MyVaxIndiana.

Indiana State Department of Health Children and Hoosiers Immunization Registry Program - Quick Reference Guide

User Accounts and Passwords

What is a CHIRP User Account?

A user account is the unique username and password needed to log in to CHIRP. All users should have their own account with an associated email address. CHIRP contains confidential information and organizations participating in CHRIP are responsible for authorizing their employees' access. **Sharing CHRIP usernames and passwords is a violation of this agreement.**

How Can I Get A User Account?

If your organization **participates in CHIRP**, and a new user needs to be added to a facility you will need to fill out an Individual User Agreement (IUA) found on the ISDH Immunization Division webpage. Click here.

You may also contact the Help Desk at 1-888-227-4439 or chirp@isdh.in.gov for help setting up a new user account.

- Please provide the Help Desk with the following information:
  - ✓ Organization name and address (e.g. School district, hospital, or parent company)
  - ✓ Facility name and address (e.g. school or clinic where you work)

You can also visit the ISDH Immunization web page for assistance. Click here.

- If your organization **does not participate in the IIS**:
  - ✓ Visit the ISDH Immunization web page to view the steps organizations must complete to get access to the IIS. Click here.

Once a user account has been set-up and activated in CHIRP, the designated user will receive an email from CHIRP in regards to how users access CHIRP, what your username is, and how to create a new password.

What are the Requirements for IIS Passwords?

Passwords must be updated every 120 days and must contain:

- At least 8 characters
- A combination of upper and lowercase letters and numbers

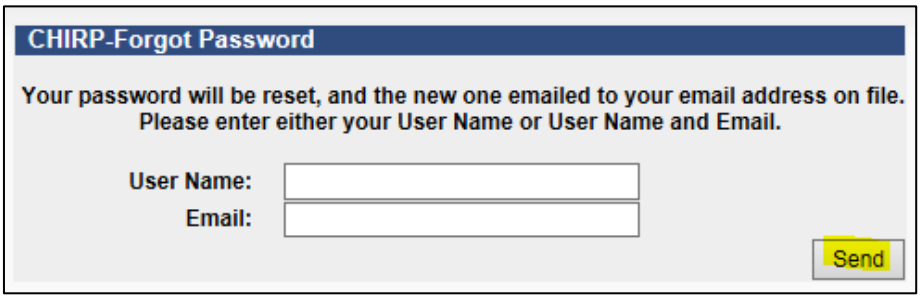
! Passwords should not be shared with anyone. Sharing usernames and passwords will ultimately lead to the termination of a user account.

What Can I Do if I Forget My Password?

If you forget your password, follow the steps below to reset it. **You must have an email address associated with your CHIRP user account in order to reset your password.**

1. Click the **Forgot Password** link on the CHIRP login screen.

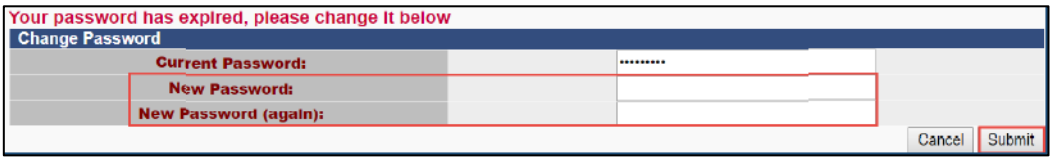
2. Enter your **User Name** and **Email**. Then click **Send**.



3. You will receive an email from **CHIRP** containing a temporary password. Please check your inbox, spam, junk and other email folders.

4. Return to the CHRIP login screen. Enter your user name and temporary password.

5. Change your password by entering a new password twice. Then click **Submit**.



6. After successfully changing your password, the system will show the message below. Select Logout in the left navigation menu and then log back in with your new password.

What Can I Do if I Forget My User Name?

If you forget your user name, please contact the CHIRP Help Desk for assistance. They will ask questions to verify that user account information matches the details supplied by the individual. They will provide your user name and direct you to reset your password if they are able to successfully verify account details.

Questions? Please Contact the CHIRP Help Desk at 1-888-227-4429 or email chirp@isdh.in.gov

Indiana State Department of Health

Indiana State Department of Health

USER REMOVAL
State Form 52309 (9-05)
Indiana State Department of Health, Immunization Program

INSTRUCTIONS: 1. Complete and return this form

Internal Use Only
IRMS
Facility
De-Activation Date

User Removal Form

This is a request to remove the following CHIRP User from the CHIRP Program:

First Name: _____ Last Name: _____

Facility: _____

Address: _____

_____

County: _____

DATE TO REMOVE: _____

_____ _____
Signature Date
Office Manager or Authorized Representative

Send Completed Form to:

CHIRP Support Center
Indiana State Department of Health
Immunization Program, 6A-22
2 North Meridian Street
Indianapolis, IN 46204

**For Immediate Removal, please fax to the CHIRP Support Center at 317-233-8827.*

CHIRP Children and Hoosiers Immunization Registry Program

Indiana State Department of Health

Indiana State Department of Health Children and Hoosiers Immunization Registry Program - Quick Reference Guide

Vaccine Doses Administered Report

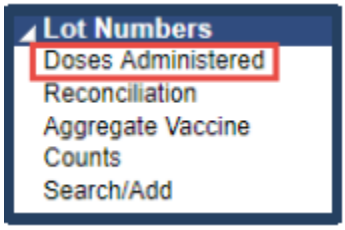
What is the Doses Administered Report?

The Doses Administered Report shows the number of vaccinations given by a facility during a reporting period (usually a one-month period). The report itemizes every dose of vaccine given by lot number and age range.

How Can I Find and Run the Doses Administered Report?

1. Locate the **Lot Numbers Section** in the left hand menu

   a. Click on **Doses Administered**

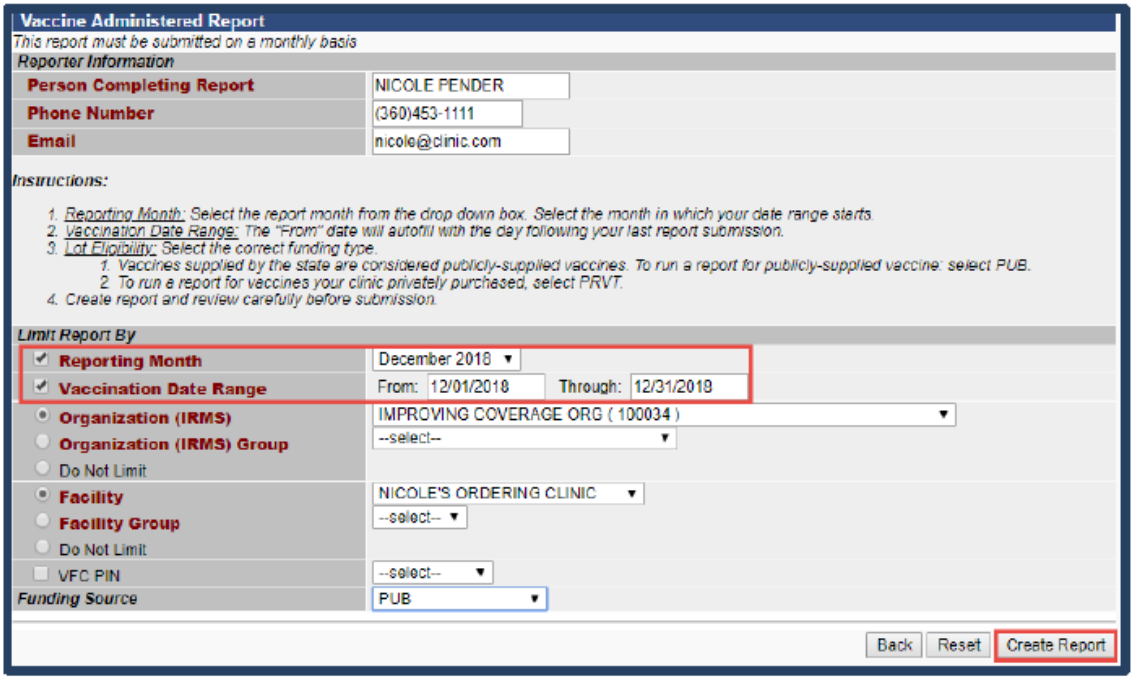


   b. Fill in the **required details** shown in **red** in CHIRP, including but **not limited** to:

   - ✓ **Person completing the report**
   - ✓ **Phone number**
   - ✓ **Email**
   - ✓ **Reporting month**- Ensure that the reporting month aligns with the starting month of the date range. For example, if your vaccination date range is December 1 – December 31, the reporting month should be December. The reporting month options only include the last year of reporting timeframes.
   - ✓ **Vaccination date range**- If you have entered a report before, this will auto populate through today's date or up to 45 days. If you are new to reporting, use a calendar month period (i.e. December 1 - 31).
   - ✓ Ensure you click the **check boxes** left of reporting month and vaccination date range

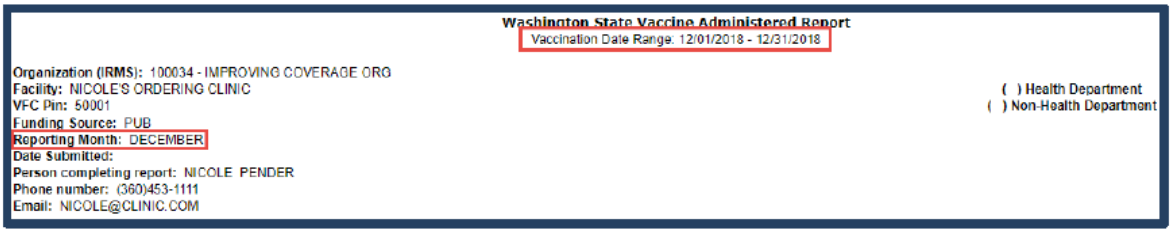
   c. Click on **Create Report** (see **Figure 2** below)

Figure 2.

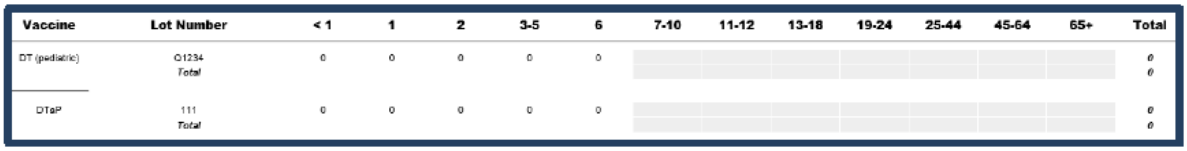


2. Verify and submit the **Doses Administered Report**

   a. When the report displays, ensure the date range and the reporting month are correct. The Vaccination Date Range is listed at the top of the page under the report title. The reporting month is listed at the top left of the page under the organization and facility details.



   b. Verify the lot numbers and number of doses administered for each age group are correct



   c. Choose one of the options at the bottom of the report, see **Table 1** below:

Table 1.

Cancel	Make no changes, and close window
Instructions	Further details about the report
Submit	Submit completed report to state for review
Aggregate reporters also have **Edit** and **Save** buttons	

Questions? Please Contact the CHIRP Help Desk at 1-888-227-4429 or email chirp@isdh.in.gov