

STANDING ORDERS FOR Administering Pneumococcal Vaccines to Children and Teens

Purpose

To reduce morbidity and mortality from invasive pneumococcal disease by vaccinating all infants and children through age 18 years who meet the criteria established by the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices.

Policy

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

Procedure

- 1 **Assess Infants and Children in Need of Vaccination** against invasive pneumococcal disease based on the following criteria:

Routine pneumococcal vaccination

A pneumococcal conjugate vaccine (PCV) series (either PCV15 or PCV20)* should be administered routinely to all children ages 2 through 59 months. Either PCV15 or PCV20 may be used any time pneumococcal conjugate vaccination of a child younger than 19 years is indicated. Children who have completed vaccination with PCV13 are not recommended to receive an additional dose of PCV15 or PCV20.

Risk-based pneumococcal vaccination

Risk-based pneumococcal vaccination recommendations are divided by type of risk condition (also listed in Table 3):

- Non-immunocompromising: age 2 years and older with chronic lung disease (including moderate persistent or severe persistent asthma), chronic heart disease, chronic liver disease, diabetes mellitus, cerebrospinal fluid (CSF) leak; cochlear implant, and chronic kidney disease (excluding maintenance dialysis and nephrotic syndrome which are included in immunocompromising conditions)
- Immunocompromising: age 2 years and older with chronic kidney disease and on maintenance dialysis or with nephrotic syndrome, congenital or acquired immunodeficiency, treatment with immunosuppressive drugs or radiation therapy, HIV infection, solid organ transplant, and sickle cell disease or other hemoglobinopathies
- Hematopoietic stem cell transplant (HSCT): specific recommendations for children of any age following HSCT (see Table 5)

***Note:** If only PCV13 is available when the child is scheduled to receive a PCV, PCV13 may be given as previously recommended.

- 2 **Screen for Contraindications and Precautions**

Contraindications

- Do not give pneumococcal conjugate vaccine (PCV15, Vaxneuvance, Merck; PCV15, Prevnar20, Pfizer) or pneumococcal polysaccharide vaccine (PPSV23, Pneumovax 23, Merck) to a person who has experienced a serious reaction or anaphylactic reaction to a prior dose of the vaccine or to any of its components (including diphtheria toxoid, which is in pneumococcal conjugate vaccines). For a list of vaccine components, refer to the manufacturers' package insert (www.immunize.org/official-guidance/fda/pkg-inserts/) or go to www.fda.gov/vaccines-blood-biologics/vaccines/vaccines-licensed-use-united-states.

Precautions (required evaluation before vaccination)

- Moderate or severe acute illness with or without fever

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3 Provide Vaccine Information Statements

Provide all patients (or, in the case of minors, their parent or legal representative) with a copy of the most current federal Vaccine Information Statement (VIS). Provide non-English speaking patients with a copy of the VIS in their native language, if one is available and desired; these can be found at www.immunize.org/vaccines/vis/pcv/ and www.immunize.org/vaccines/vis/psv/. For information about how to document that the VIS was given, see section 6 titled "Document Vaccination."

4 Prepare to Administer Vaccine

PCV15 and PCV20 must be given intramuscularly (IM). PPSV23 may be administered IM or subcutaneously (Subcut). For vaccine that is to be administered IM, choose the needle gauge, needle length, and injection site according to the following chart:

AGE OF INFANT/CHILD	NEEDLE GAUGE	NEEDLE LENGTH	INJECTION SITE
Younger than 12 months	22–25	1"	Anterolateral thigh muscle
12 through 35 months	22–25	1–1¼"	Anterolateral thigh muscle*
		⅝**–1"	Deltoid muscle of arm
3 through 10 years	22–25	⅝**–1"	Deltoid muscle of arm*
		1–1¼"	Anterolateral thigh muscle
11 through 18 years	22–25	⅝**–1"	Deltoid muscle of arm*
		1–1½"	Anterolateral thigh muscle

* Preferred site.

** A ⅝" needle may be used for children for IM injection in the deltoid muscle only if the skin is stretched tight, the subcutaneous tissue is not bunched, and the injection is made at a 90-degree angle.

When administering PPSV23, if you prefer Subcut injection, choose a 23–25 gauge, ⅝" needle for injection into the fatty tissue overlying the triceps muscle.

5 Administer Pneumococcal Vaccine

Refer to the tables on page 3 and 4 to determine the appropriate vaccine based on age, vaccination history, and presence or absence of risk conditions; then, administer the appropriate vaccine as follows:

- PCV15 or PCV20, 0.5 mL, via the IM route, to all healthy children to children or to children with a risk condition, age 2 months and older (minimum age for first dose is 6 weeks)
- PPSV23, 0.5 mL, via the IM or Subcut route, as an option when PCV20 is not available, for certain children with risk conditions, age 2 years and older

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Follow the guidance in the tables 1–5 for choosing the vaccine type, appropriate age, number of doses, and dosing intervals.

Table 1. Recommended schedule for administering pneumococcal conjugate vaccine (PCV) to all children (healthy and those with risk conditions) age 2 through 23 months

Child's age now	Number of previous PCV13, PCV15 or PCV20 doses	Number PCV15 or PCV20 doses to complete series by age 24 mos ^{*†}
2 [‡] through 6 months	0	4 doses: 3 doses 8 weeks apart; last dose at age 12–15 months
	1	3 additional doses: 2 doses, 8 weeks apart; last dose at age 12–15 months
	2	2 additional doses: 1 dose 8 weeks after most recent dose; last dose at least 8 weeks later at age 12–15 months
	3	1 additional dose at age 12–15 months
7 through 11 months	0 before age 7 months	3 doses; 2 doses 8 weeks apart; last dose at age 12–15 months
	1 or 2 before age 7 months	2 additional doses: 1 dose 8 weeks after most recent dose; last dose at least 8 weeks later, at age 12–15 months
	3 before age 7 months	1 additional dose at age 12–15 months
	1 at age 7 months or older	2 additional doses; 1 dose 8 weeks after most recent doses; last dose at least 8 weeks later, at age 12–15 months
	2 at age 7 months or older	1 additional dose at least 8 weeks later, at age 12–15 months
12 through 23 months	0 before age 12 months	2 doses: 2 doses 8 weeks apart
	1 before age 12 months	2 additional doses: 1 dose at least 8 weeks after most recent dose; last dose at least 8 weeks later
	2 or 3 before age 12 months	1 additional dose, at least 8 weeks after most recent dose
	1 dose at age 12 months or older	1 additional dose, at least 8 weeks after the most recent dose

^{*}If only PCV13 is available when the child is scheduled to receive PCV, PCV13 may be given as previously recommended.

[†]Minimum interval between doses: for children younger than age 12 months = 4 weeks; for children age 12 months or older = 8 weeks

[‡]Minimum age for dose 1 is 6 weeks.

Table 2. Recommended schedule for administering pneumococcal conjugate vaccine (PCV) to healthy children age 24 months through 18 years

Child's age now	Number of previous PCV13, PCV15, or PCV20 doses	Number of PCV15 or PCV20 doses needed [*]
24 through 59 months	Completed any PCV schedule, including an all-PCV13 schedule by 24 months	No additional doses
	No previous doses or any incomplete PCV schedule by age 24 months	1 additional dose, at least 8 weeks after most recent PCV dose
5 through 18 years	No previous doses or any incomplete PCV schedule by 24 months	No additional doses

^{*}If only PCV13 is available when the child is scheduled to receive PCV, PCV13 may be given as previously recommended.

Table 3. Risk conditions for which additional doses of PCV15, PCV20, or pneumococcal polysaccharide (PPSV23) vaccines are indicated for children age 24 months through 18 years

Non-immunocompromising conditions (non-IC)	Immunocompromising conditions (IC)
Chronic lung disease (including moderate persistent or severe persistent asthma)	Asplenia or splenic dysfunction
Chronic heart disease	Congenital or acquired immunodeficiency
Chronic liver disease	Treatment with immunosuppressive drugs or radiation therapy
Diabetes mellitus	HIV infection
Cerebrospinal fluid leak	Solid organ transplant
Cochlear implant	Sickle cell disease or other hemoglobinopathies
Chronic kidney disease (except as specified in the IC list)	Kidney disease and on maintenance dialysis
	Kidney disease with nephrotic syndrome

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Table 4. Recommended schedule for administering pneumococcal vaccine to children age 24 months through 18 years with immunocompromising (IC) and non-immunocompromising (non-IC) risk conditions (see Table 3 for risk conditions)

Child's age now	Number of previous PCV13, PCV15, or PCV20 doses	Option A	Option B (if applicable)
24 through 71 months (any risk condition)	Any incomplete schedule of 0, 1, or 2 PCV doses by age 24 months	2 doses of PCV20 or PCV15,* given at least 8 weeks apart	
24 through 71 months (any risk condition)	3 doses of PCV, all before 12 months	1 dose of PCV20 or PCV15*	
2 through 18 years (any risk condition)	Completed PCV series before age 6 years, including one or more doses of PCV20	No additional doses	
2 through 18 years (non-IC only)	Completed PCV series before age 6 years with PCV13 and/or PCV15 (no PCV20, no PPSV23 [†])	1 dose of PCV20 at least 8 weeks after most recent PCV dose	1 dose of PPSV23 at least 8 weeks after most recent PCV dose
2 through 18 years (IC only)	Completed PCV series before age 6 years with PCV13 and/or PCV15 (no PCV20, no PPSV23 [‡])	1 dose of PCV20 at least 8 weeks after most recent PCV dose	1 dose of PPSV23 at least 8 weeks after most recent PCV dose; at least 5 years later, give 1 dose of PCV20 or a second dose of PPSV23 [‡]
6 through 18 years (non-IC)	No previous dose of PCV13, PCV15, or PCV20	1 dose of PCV20 at least 8 weeks after most recent pneumococcal vaccination	1 dose of PCV15 at least 8 weeks after most recent pneumococcal vaccination. At least 8 weeks later, give 1 dose of PPSV23, if PPSV23 not previously given. If PPSV23 previously given, do not give another dose of PPSV23.
6 through 18 years (IC)	No previous dose of PCV13, PCV15, or PCV20	1 dose of PCV20 at least 8 weeks after most recent pneumococcal vaccination	1 dose of PCV15 at least 8 weeks after most recent pneumococcal vaccination. At least 8 weeks later, give 1 dose of PPSV23, if PPSV23 not previously given. If PPSV23 previously given, do not give another dose of PPSV23.
6 through 18 years (non-IC)	PCV13 only, given at or after age 6 years	1 dose of PCV20 at least 8 weeks after most recent PCV13 dose	1 dose of PPSV23 at least 8 weeks after most recent PCV13 dose
6 through 18 years (IC)	PCV13 only, given at or after age 6 years	1 dose of PCV20 at least 8 weeks after most recent PCV13 dose	1 dose of PPSV23 at least 8 weeks after most recent PCV13 dose; at least 5 years after the first PPSV23 dose, give 1 dose of PCV20 or a second dose of PPSV23

*If PCV15 is used, one or two additional pneumococcal vaccine doses will be needed. For options, refer to the appropriate row of this table for a child age 2 through 18 years (IC or non-IC) who completed the PCV series before age 6 years without a dose of PCV20.

[†]If PPSV23 previously given, then child is complete.

[‡]If PPSV23 previously given, options are (a) give one dose of PCV20 at least 8 weeks after most recent pneumococcal vaccination, or (b) give a second dose of PPSV23 five years after the first dose of PPSV23.

Table 5. Recommended schedule for administering pneumococcal conjugate vaccine to any child younger than age 19 years following a hematopoietic stem cell transplant (HSCT)

Current age	Previous pneumococcal vaccination	Recommended schedule
Younger than 19 years	Any	4 doses of PCV20, beginning 3 to 6 months after HSCT: give 3 doses 4 weeks apart, then a 4th dose at least 6 months after dose 3 and at least 12 months after HSCT [§]

[§]If PCV20 is unavailable: give 3 doses of PCV15, beginning 3 to 6 months after HSCT (administer 4 weeks apart), then give a dose of PPSV23 at least 12 months after HSCT. If the patient has chronic graft-versus-host disease (GVHD), administer a 4th dose of PCV15 at least 12 months after HSCT, instead of PPSV23.

Note: For additional decision support, use the CDC PneumoRecs VaxAdvisor mobile app for vaccination providers. To learn more or download the app, visit www.cdc.gov/pneumococcal/hcp/vaccine-recommendations/app.html.

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6 Document Vaccination

Document each patient's vaccine administration information and update the following:

- Medical record: Record the date the vaccine was administered, the manufacturer and lot number, the vaccination site and route, and the name and address and, if appropriate, the title of the person administering the vaccine. You must also document, in the patient's medical record or office log, the publication date of the VIS and the date it was given to the patient. Note that medical records/charts should be documented and retained in accordance with applicable state laws and regulations. If vaccine was not administered, record the reason(s) for non-receipt of the vaccine (e.g., medical contraindication, patient refusal); discuss the need for vaccine with the patient (or, in the case of a minor, their parent or legal representative) at the next visit.
- Personal immunization record card: Record the date of vaccination and the name/location of the administering clinic.
- Immunization Information System (IIS) or "registry": Report the vaccination to the appropriate state/local IIS, if available.

7 Be Prepared to Manage Medical Emergencies

Be prepared for management of a medical emergency related to the administration of vaccine by having a written emergency medical protocol available, as well as equipment and medications. For Immunize.org's "Medical Management of Vaccine Reactions in Children and Teens in Community Settings," go to www.immunize.org/catg.d/p3082a.pdf. For "Medical Management of Vaccine Reactions in Adults in Community Settings," go to www.immunize.org/catg.d/p3082.pdf. To prevent syncope, vaccinate patients while they are seated or lying down and consider observing them for 15 minutes after receipt of the vaccine.

8 Report Adverse Events to VAERS

Report all adverse events following the administration of pneumococcal vaccine to the federal Vaccine Adverse Event Reporting System (VAERS). To submit a VAERS report online (preferred) or to download a writable PDF form, go to <https://vaers.hhs.gov/reportevent.html>. Further assistance is available at (800) 822-7967.

Standing Orders Authorization

This policy and procedure shall remain in effect for all patients of the _____			
NAME OF PRACTICE OR CLINIC			
effective _____	DATE	until rescinded or until _____	DATE
Medical Director _____	PRINT NAME	/ _____	SIGNATURE
			DATE